Customer's Record

The model number and serial number of this product may be found on its rear panel. You should note this serial number in the space provided below and retain this book, plus your purchase receipt, as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

Model Number ____________________ Serial Number ____________________

Matsushita Electric Industrial Co., Ltd.

Web Site : http://panasonic.net/

Printed in Japan
MBS0407S0

Panasonic

Operating Instructions
Plasma Television

Model No. **TH-37PV70AZ**
TH-42PV70AZ
TH-50PV70AZ

VIERA



VIERA Link

HDMI
HIGH-DEFINITION MULTIMEDIA INTERFACE

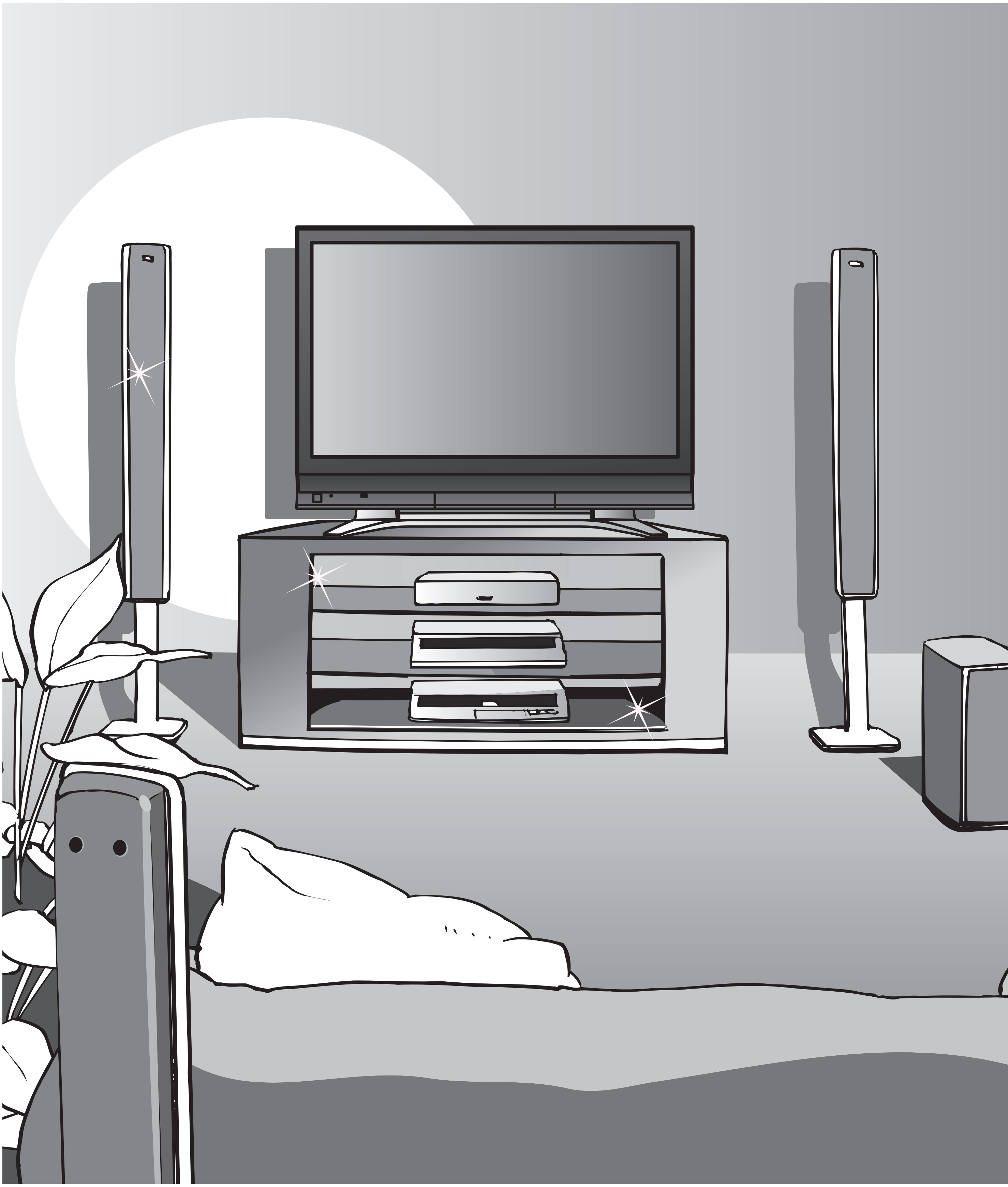
English

Please read these instructions before operating your set and retain them for future reference.
The images shown in this manual are for illustrative purposes only.

TQBC2160

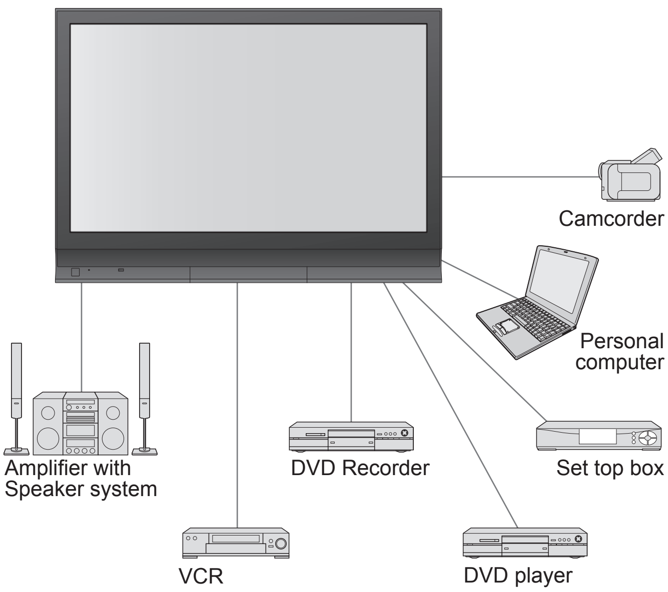
Turn your own living room into a movie theatre!

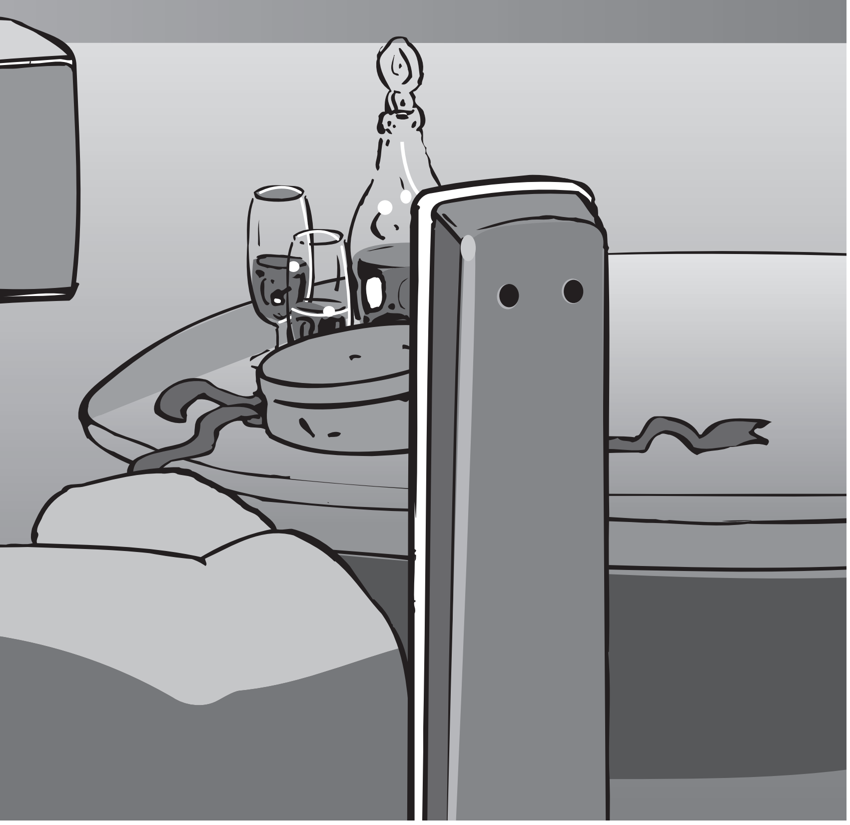
Experience an amazing level of multi-



media excitement

Enjoy rich multi-media





Contents

Be Sure to Read

Quick Start Guide

Enjoy your TV!

Basic Features

Advanced Features

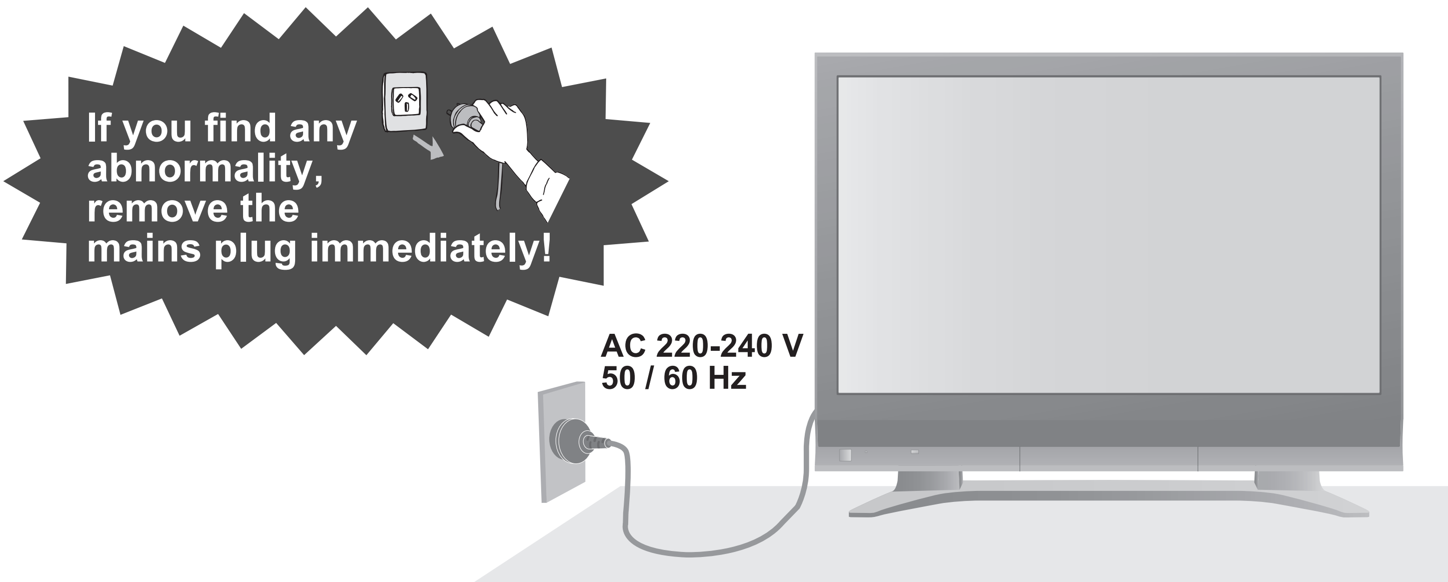
FAQs, etc.

Safety Precautions

Warning

Handling the mains plug and lead

- Insert the mains plug fully into the socket outlet. (If the mains plug is loose, it could generate heat and cause fire.)
- Ensure that the mains plug is easily accessible.
- Ensure the grounding pin on the mains plug is securely connected to prevent electrical shock.
- Do not touch the mains plug with a wet hand. (This may cause electrical shock.)
- Do not use any mains lead other than that provided with this TV. (This may cause fire or electrical shock.)
- Do not damage the mains lead. (A damaged lead may cause fire or electrical shock.)
  - Do not move the TV with the lead plugged in the socket outlet.
  - Do not place a heavy object on the lead or place the lead near a high-temperature object.
  - Do not twist the lead, bend it excessively, or stretch it.
  - Do not pull on the lead. Hold onto the mains plug body when disconnecting lead.
  - Do not use a damaged mains plug or socket outlet.



Do not remove covers NEVER modify the TV yourself

(High-voltage components may cause serious electrical shock.)

- Have the TV checked, adjusted, or repaired at your local Panasonic dealer.

Keep liquids away from the TV

- To prevent damage which may result in fire or shock hazard, do not expose this appliance to dripping or splashing.
- Do not place containers with water (flower vase, cups, cosmetics, etc.) above the TV. (including on shelves above, etc.)

Do not expose to direct sunlight and other sources of heat

- Avoid exposing the TV to direct sunlight and other sources of heat. To prevent fire never place any type of candle or naked flame on top or near the TV.

Do not place foreign objects inside the TV

- Do not let metal or flammable objects drop into the TV through the air vents (fire or electrical shock may result).

Do not place the TV on sloped or unstable surfaces

- The TV may fall off or tip over.

Use only the dedicated stands / mounting equipment

- Using an unauthorized stand or other fixtures may make the TV shaky, risking injury. Be sure to ask your local Panasonic dealer to perform setup.
- Use optional stands / mounts (p. 6).

Notes

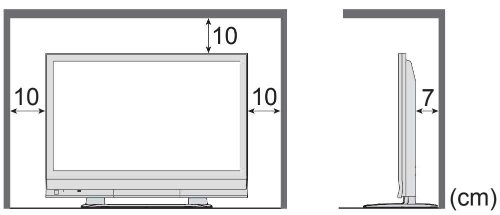
Caution

When cleaning the TV, remove the mains plug
(Cleaning an energized TV may cause electrical shock.)

When TV will not be used for a long time, remove the mains plug
- This TV will still consume some power even in the Off mode, as long as the mains plug is still connected to a live socket outlet.

Transport only in upright position
- Transporting the TV with its display panel facing upright or downward may cause damage to the internal circuitry.

Allow sufficient space around the TV for radiated heat
Minimum distance



Do not block the rear air vents
- Blocked ventilation by curtains, etc. may cause overheating, fire or electrical shock.



Do not display a still picture for a long time
This causes the image to remain on the plasma screen ("image retention").
This is not considered a malfunction and is not covered by the warranty.

Typical still images
- Channel number and other logos
- Image displayed in 4:3 mode
- Video game
- Computer image



To prevent image retention, contrast is lowered automatically after a few minutes if no signals are sent or no operations are performed. (p. 36)

Auto power standby function
- If no signal is received and no operation is performed in TV mode for 30 minutes, the TV will automatically go to standby mode.

Keep the TV away from these equipment
- Electronic equipment
  In particular, do not place video equipment near the TV (electromagnetic interference may distort images / sound).
- Equipment with an infrared sensor
  This TV also emits infrared rays (this may affect operation of other equipment).

Maintenance

First, remove the mains plug from the socket outlet.

Display panel
Regular care: Gently wipe the surface clean of dirt by using a soft cloth.
Major contamination: Wipe the surface clean using a soft cloth dampened with clean water or diluted neutral detergent by 100 times of water. Then, using a soft dry cloth, evenly wipe the surface clean until it is dry.

Caution
- The surface of the display panel has been specially treated and may be easily damaged.
  Do not tap or scratch the surface with your fingernail or other hard object.
- Use care not to subject the surface to bug repellent, solvent, thinner, or other volatile substances (this may degrade surface quality).

Cabinet
Regular care: Wipe the surface clean using a soft dry cloth.
Major contamination: Dampen a soft cloth with clean water or water containing a small amount of neutral detergent. Then, wring the cloth and wipe the surface clean with it. Finally, wipe the surface clean with a dry cloth.

Caution
- Use care not to subject the TV's surfaces to detergent.
  (A liquid inside the TV could lead to product failure.)
- Use care not to subject surfaces to bug repellent, solvent, thinner, or other volatile substances (this may deteriorate the surface by peeling the paint).
- Do not allow the cabinet to make contact with a rubber or PVC substance for a long time.

Mains plug
Wipe the mains plug with a dry cloth at regular intervals. (Moisture and dust may lead to fire or electrical shock.)

Accessories / Options

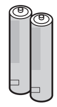
Standard accessories

Check that you have the accessories and items shown ☑

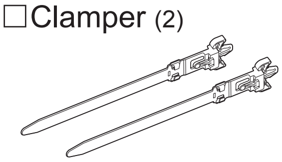
- ☐Remote Control Transmitter
  - EUR7651140



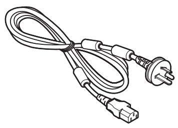
- ☐Batteries for the Remote Control Transmitter (2)
  - R6 (AA)



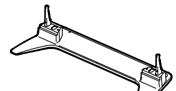
- ☐Clamper (2)



- ☐Operating Instructions
- ☐Mains Lead



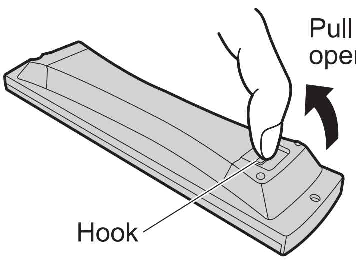
- ☐Pedestal (ST-42H2-WK / ST-50H2-WK)
  - TBLX0024 (TH-37PV70AZ)
  - TBLX0023 (TH-42PV70AZ)
  - TBLX0025 (TH-50PV70AZ)



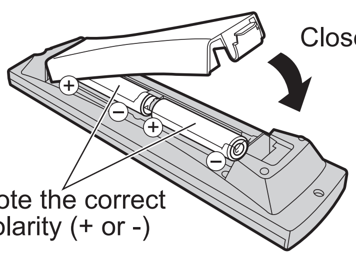
Read the manual of the pedestal for installation.

Installing remote's batteries

1



2

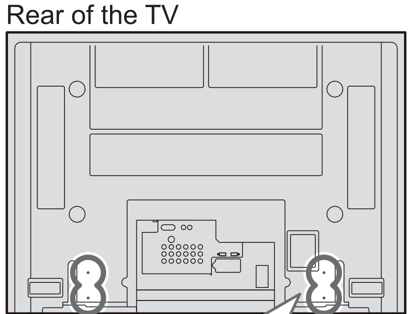


Caution

- Incorrect installation may cause battery leakage and corrosion, resulting in damage to the remote control.
- Do not mix old and new batteries.
- Do not mix different battery types (such as alkaline and manganese batteries).
- Do not use rechargeable (Ni-Cd) batteries.
- Do not burn or breakup batteries.

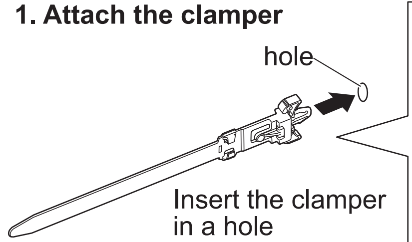
Using the clamper

Rear of the TV

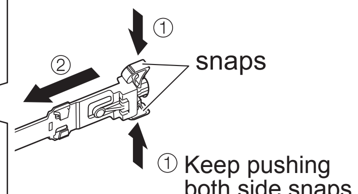


- Do not bundle the RF cable and mains lead together (could cause distorted image).
- Fix cables with clampers as necessary.
- When using the optional accessory, follow the option's assembly manual to fix cables.

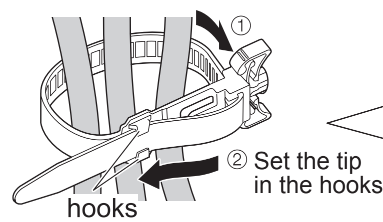
1. Attach the clamper



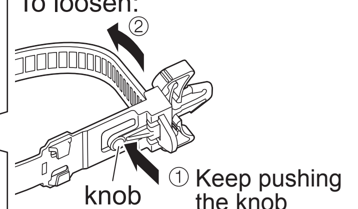
To remove from the TV:



2. Bundle the cables



To loosen:



Optional accessories

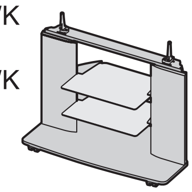
Pedestal

- TY-ST42D1-WK
- TY-ST42D2-WK
  (TH-37PV70AZ, TH-42PV70AZ)
- TY-ST50D1-WK
- TY-ST50D2-WK
  (TH-50PV70AZ)



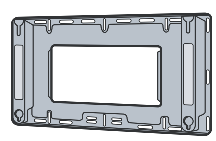
Plasma TV stand

- TY-S37PX70WK
  (TH-37PV70AZ)
- TY-S42PX70WK
  (TH-42PV70AZ)
- TY-S50PX70WK
  (TH-50PV70AZ)



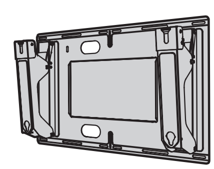
Wall-hanging bracket (vertical)

- TY-WK42PV3W



(angle)

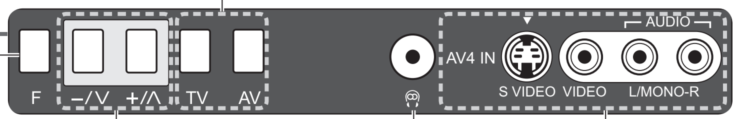
- TY-WK42PR2W
- TY-WK42PR3W



Caution

- In order to maintain the unit's performance and safety, be absolutely sure to ask your dealer or a licenced contractor to secure the wall-hanging brackets.
- Carefully read the instructions accompanying the plasma TV stand or pedestal, and be absolutely sure to take steps to prevent the TV from tipping over.
- Handle the TV carefully during installation since subjecting it to impact or other forces may cause product damage.

Identifying Controls



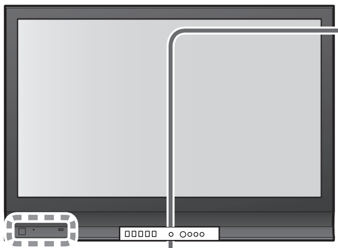
Changes the input mode

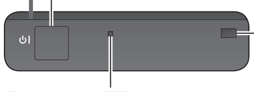
Function select
- Volume / Contrast / Brightness / Colour / Sharpness / Tint (NTSC mode) / Bass / Treble / Balance / Auto Tuning (p. 23)

Increases or decreases the programme position by one. When a function is already displayed, press to increase or decrease the selected function. When in Standby mode, switches TV On.

Headphones jack (p. 30)

AV4 terminals (p. 30)

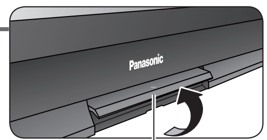




Mains power On / Off switch

Remote control signal receiver

Power LED
- Standby: red
  On: green



Lift door to open



Standby On / Off switch
(Switches TV On or Off standby)

Changes aspect ratio (p. 13)

OK button to confirm selections and choices
Press after selecting programme positions to quickly change programme.

Main Menu
Press to access VIERA Link, Picture, Sound, Setup menus and Language (p. 10 and p. 18)

Surround (p. 20)

Access VIERA Link Menu (p. 29)

Programme / channel change buttons (0-9) and Teletext page buttons. (p. 12 and p. 16)
When in Standby mode, switches TV On.

Programme Information (p. 13)

Selects programmes in sequence

Teletext (p. 16)

Viewing a favourite teletext channel (p. 17)

VCR / DVD operations (p. 15)

Changes the input mode
TV - changes TV mode (p. 14)
AV - changes AV input mode (p. 14)

EXIT (Returns to TV screen)

Cursor buttons to make selections and adjustments

Returns to the previous menu

Coloured buttons used for the selection, navigation and operation of various functions

Stereo / Bilingual Sound Selection (p. 34)

Option menu
Sets the preferred settings of viewing and sound options easily (p. 13)

Sound mute On / Off

Volume

Still picture (p. 13)
Teletext Hold (p. 17)

Teletext Index (p. 17)

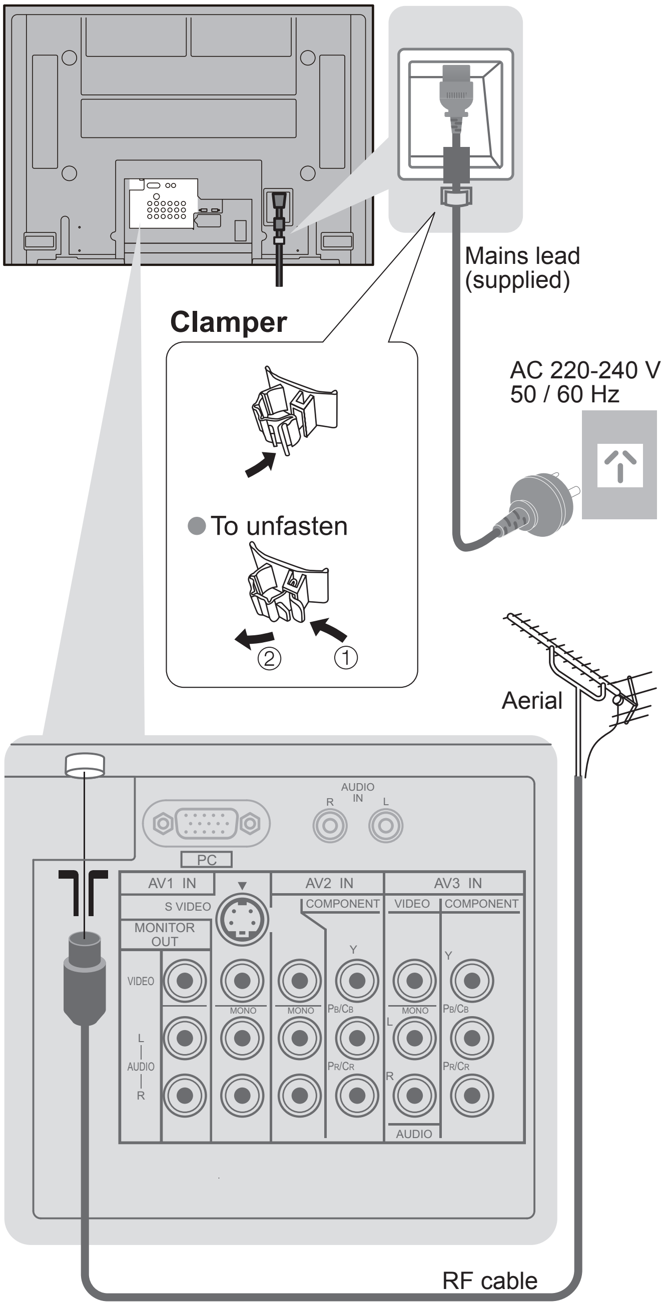
Basic Connection

External equipment and cables shown are not supplied with this TV.
Please ensure that the unit is disconnected from the mains socket before attaching or disconnecting any leads.
When disconnecting the mains lead, be absolutely sure to disconnect the mains plug at the socket outlet first.

Example 1 Connecting aerial

TV only

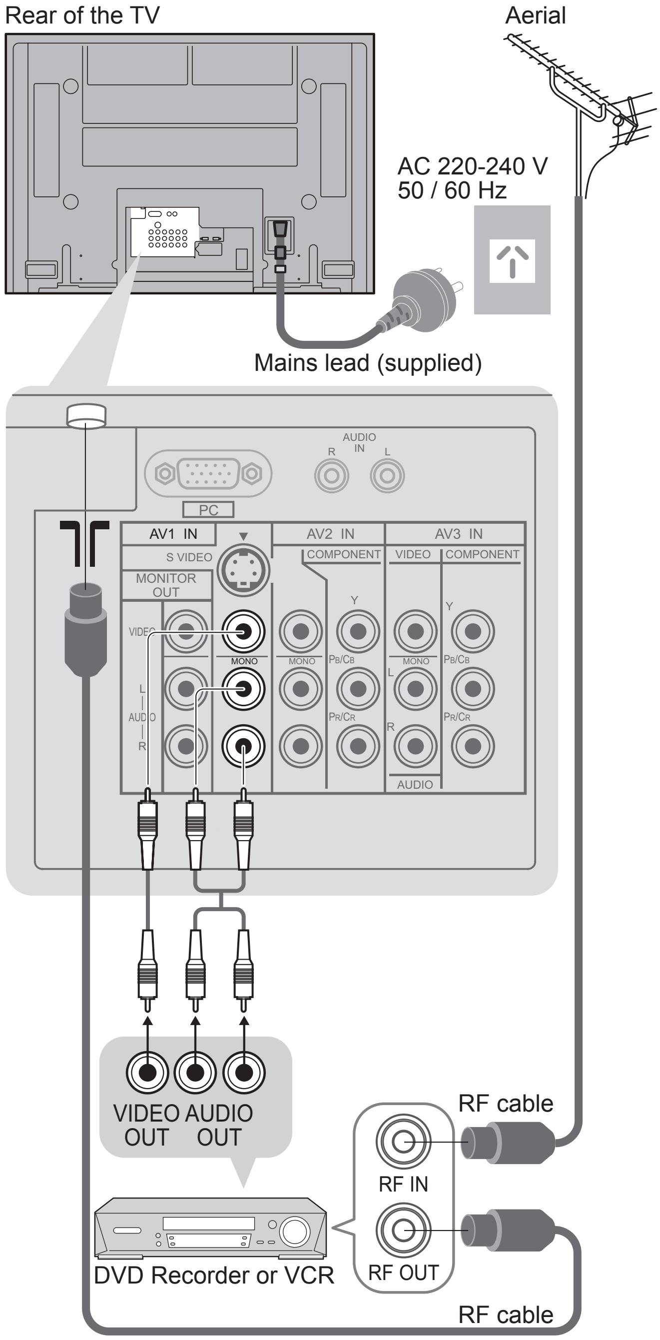
Rear of the TV



Example 2 Connecting DVD Recorder / VCR

TV, DVD Recorder or VCR

Rear of the TV



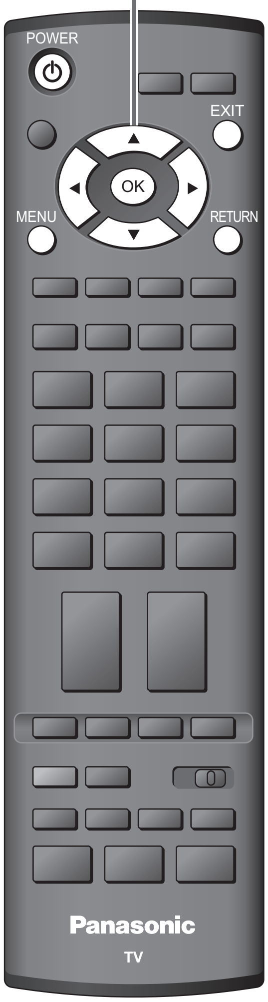
Note

- Do not put the Coaxial cable close to the mains lead to avoid noise.
- Do not place the Coaxial cable under the TV.
- To obtain optimum quality picture and sound, an Aerial, the correct cable (75 Ω coaxial) and the correct terminating plug are required.
- If a communal Aerial system is used, you may require the correct connection cable and plug between the wall Aerial socket and the TV.
- Your local Television Service Centre or dealer may be able to assist you in obtaining the correct Aerial system for your particular area and the accessories required.
- Any matters regarding Aerial installation, upgrading of existing systems or accessories required, and the costs incurred, are the responsibility of you, the Customer.

Auto Tuning

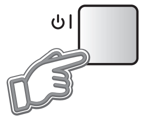
Search and store TV channels automatically.
These steps are not necessary if the setup has been completed by your local dealer.





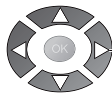
1 Plug the TV into mains socket and switch On

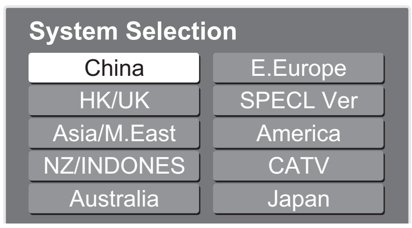
(Takes a few seconds to be displayed)



- You can now use the remote control to turn On the TV or turn the TV to standby mode. (Power LED: On)

2 Select your system





System Selection	REGION
China	China
HK/UK	Hong Kong, United Kingdom
Asia/M.East	Malaysia, Singapore, Thailand, Asia countries, Kuwait, Saudi Arabia, United Arab Emirates, Middle East countries, etc.
NZ/INDONES	New Zealand, Indonesia, etc.
Australia	Australia
E.Europe	CIS, Poland, etc.
SPECL Ver	South Africa
America	USA, Chile, Mexico, Panama, Pelu, Philippines, Taiwan, Venezuela, etc.
CATV	USA CATV
Japan	Japan

3 Start Auto Tuning





- Auto Tuning will start to search for TV channels and store them.
  The TV memorises the channels tuned in order from programme number 1.
  The sorted programme order depends upon the TV signal, the broadcasting system and reception conditions.

Auto Tuning is now complete and your TV is ready for viewing.



- To edit channels
  ➡ Editing and Setting Channels (p. 22)

Note

- If tuning have failed ➡ “Auto Tuning” (p. 23).
- If you turned the TV Off during Standby mode last time, the TV will be in Standby mode when you turn the TV On with Mains power On / Off switch.

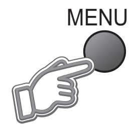
Language Setting

You can change language for on-screen displays.



1

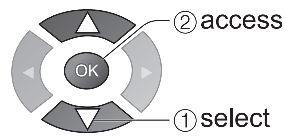
Display the menu



2

Select “Language”

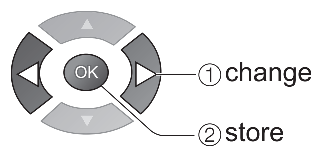




3

Select the language





Using the On Screen Displays

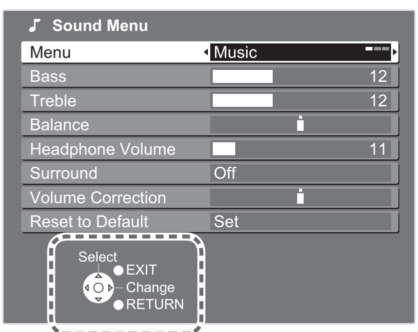
Many features available on this TV can be accessed via the On Screen Display menu.

■ How to use remote control

MENU	Open the main menu
▲ / ▼	Move the cursor / select the menu
◄ / ►	Move the cursor / adjust levels / select from a range of options
OK	Access the menu / store settings after adjustments have been made or options have been set
RETURN	Return to the previous menu
EXIT	Exit the menu system and return to the normal viewing screen

■ ON SCREEN HELP Instructions box

(example: Sound Menu)



On-screen operation guide will help you.

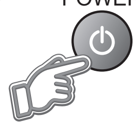
Watching TV



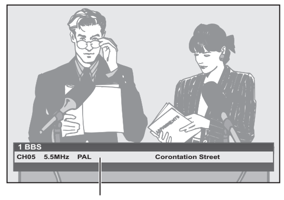
Volume

1 Turn power on

POWER

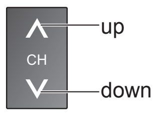


● Mains power On / Off switch should be On.

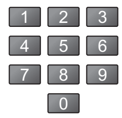


Information banner

2 Select a channel



or



● To select the two or three-digit programme number, e.g. 39

➡ 3 ➡ 9 (in a short time)

■ Other useful functions (Operate after ②)

Hold

Freeze / unfreeze picture HOLD

Display the current programme status

Check or change the current programme status instantly OPTION

- To change ➡ ② change ① select

Teletext Language
➡ Selects teletext language

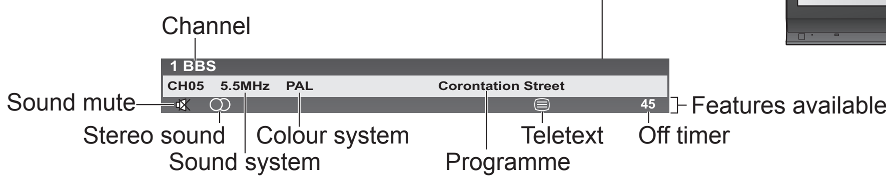
Volume Correction
➡ Adjusts volume of individual channel or input mode

Note
- Also possible to change the settings in Menu list (p. 20 and p. 21).

Display information banner

Display programme information RECALL



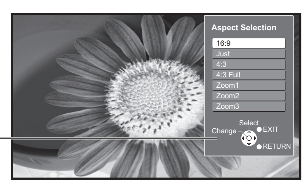


- To select another channel ➡ ⬤ ➡ OK
- To hide ➡ EXIT
- To set display timeout
  ➡ "Banner Display Timeout" (p. 21)
- Appears also when changing channel.
- Programme information is referred to teletext signal.

Change aspect ratio

Change the aspect ratio (p. 33) ASPECT

Enjoy viewing the picture at its optimum size and aspect.



Aspect Selection list

- To change the mode
  Display Aspect Selection list ASPECT ➡ During the list is displayed, select the mode ➡ Store OK
- To change the mode using the ASPECT button only
  ➡ ASPECT (Press repeatedly until you reach the desired mode)

Watching Videos and DVDs

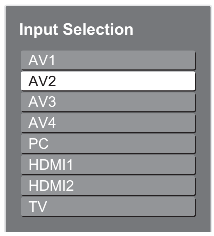
Connect the external equipment (VCRs, DVD equipment, etc.) and you can watch the input.
To connect the equipment (p. 8)
The Remote Control is capable of operating some functions of selected Panasonic external equipment.

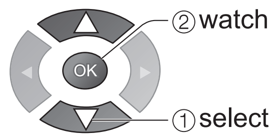


1 Display the Input select menu



2 Select the input mode connected to the equipment

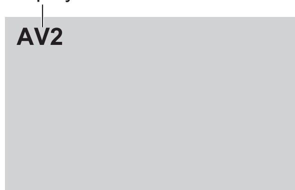




- You can also select the input using the AV button on the remote control or the front panel of the TV.
  Press the button repeatedly until the desired input is selected.
- You can label or skip each input modes ➡ “Input Labels” (p. 26)

3 View

Displays the selected mode



■ **To return to TV**

➡ TV

Note

- If the external equipment has an aspect adjustment function, set to “16:9”.
- For details, see the manual of the equipment or ask your local dealer.

Panasonic equipment connected to the TV can be directly operated with the remote control.

VCR / DVD	**VCR / DVD switch*** Select VCR to operate Panasonic VCR or DVD equipment Select DVD to operate Panasonic DVD equipment or Player home theatre
POWER	**Standby** Set to Standby mode / Turn on
▶	**Play** Playback videocassette / DVD
■	**Stop** Stop the operations
⏮ ◀◀	**Rewind / Skip / Search** VCR: Rewind, view the picture rapidly in reverse DVD: Skip to the previous track or title Press and hold to search backward
⏭ ▶▶	**Fast-forward / Skip / Search** VCR: Fast-forward, view the picture rapidly forward DVD: Skip to the next track or title Press and hold to search forward
II/I▶	**Pause** Pause / Restart DVD: Press and hold to play at slow speed
PROGRAMME ∨ ∧	**Programme Up / Down** Select programme
REC ●	**Record** Start recording

***Setting your remote control to operate Panasonic VCR, DVD, etc.**

① Set the VCR / DVD switch to the appropriate position ➡ VCR / DVD

② Press and hold POWER during the following operations

Enter the appropriate code for the equipment to be controlled, see table below (1 2 3 4 5 6 7 8 9 0) ➡ Press ■

"VCR" position

Equipment	Code
VCR	10 (default)
DVD	11

"DVD" position

Equipment	Code
DVD	70 (default)
Player home theatre	71

Note

- Confirm correct operation after the code changed.
- "DVD" means DVD player, DVD recorders and Recorder home theatre.
- Some operations may not be possible on some equipment models.

Viewing Teletext

You can enjoy teletext broadcasting, including news, weather forecasts and subtitles, if this service is provided by the broadcasters.

What is FASTEXT mode?
In FASTEXT mode, four differently coloured subjects are situated at the bottom of the screen. To access more information about one of these subjects, press the appropriately coloured button. This facility enables fast access to information on the subjects shown.

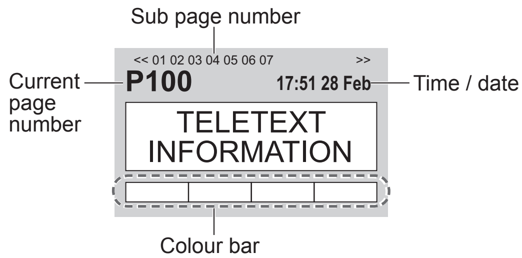
What is List mode?
In List mode, four differently coloured page numbers are situated at the bottom of the screen. Each of these numbers can be altered and stored in the TV's memory. ("Store frequently viewed pages", p. 17)

■ **To change mode** ➡ "Teletext" in Setup Menu (p. 21)



1 Switch to Teletext

TEXT ● Displays Index (content varies depending on the broadcasters)



2 Select the page

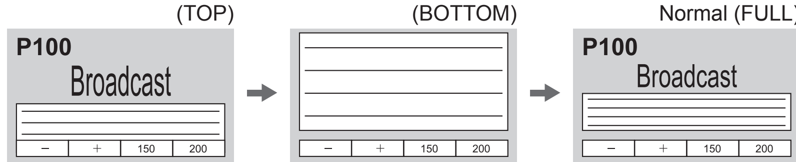
1 2 3 4 5 6 7 8 9 0 or up / down or R G Y B (Corresponds to the colour bar)

■ **To adjust contrast** ➡ MENU ➡ As the blue bar is displayed ◀ ▶

■ **To return to TV** ➡ TEXT

■ **Using teletext conveniently**

Reveal hidden data	Reveal hidden words e.g. quiz page answers MENU ➡ R ● Re-hide ➡ R
FULL / TOP / BOTTOM	MENU ➡ G (TOP) (Expand the TOP half) ➡ (BOTTOM) (Expand the BOTTOM half) ➡ Normal (FULL)



HOLD

If you wish to hold the current page without updating

Stop or resume automatic updating

HOLD

■ To resume → HOLD

INDEX

Return to the main index page

INDEX

Call up a favourite pages

F.P.

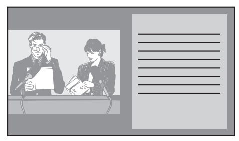
- Call up the page stored in "blue".
- Factory setting is "P103".

View in multi window

Watch TV and Teletext in two windows at once

MENU (Press twice) → OK

- Select Picture and text On or Off



- Operations can be made only in Teletext screen.

Store frequently viewed pages

Store frequently viewed pages in the colour bar

(List mode only)

As page is displayed → Corresponding colour button → OK press and hold

P100
Broadcast
101 200 400 888

The number changes to white.

■ **To change stored pages**

→ Colour button you want to change → Enter new page number (1 2 3 4 5 6 7 8 9 0) → OK press and hold

View sub page

View sub page (Only when teletext is more than one page)

<<01 02 03 04 05 — Appears at upper-left corner of the screen

■ **To view specific sub page**

→ MENU → B

T****
Broadcast

→ Enter the 4-digit number

example: P6

0 0 0 6

T0006

- Sub pages:
  The number of sub pages varies depending on the broadcasters (up to 79 pages).
  It may take some time for searching, during which time you can watch TV.

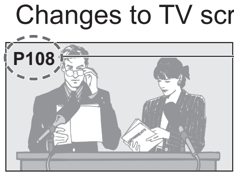
Watch TV while waiting for update

View the TV picture while searching for a teletext page

Teletext automatically updates itself when new information becomes available.

Changes to TV screen temporarily

MENU → Y →



Appears when updating is completed → Y → View the updated page

(You cannot change the channel.)

- The news page provides a function that indicates arrival of latest news ("News Flash").

Viewing

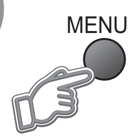
● Viewing Teletext

How to Use Menu Functions

Various menus allow you to make settings for the picture, sound, and other functions.

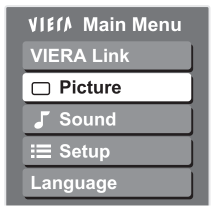


1 Display the menu

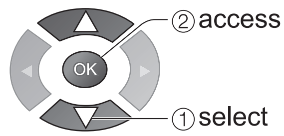


- Displays the functions that can be set (varies according to the input signal)

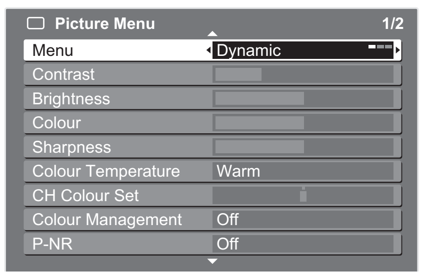
2 Select the menu



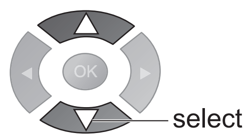
(example: Picture Menu)



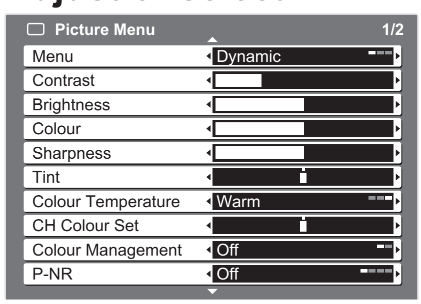
3 Select the item



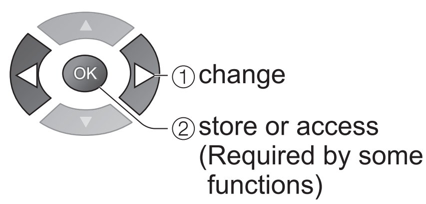
(example: Picture Menu)



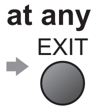
4 Adjust or select



(example: Picture Menu)



■ To return to TV at any time



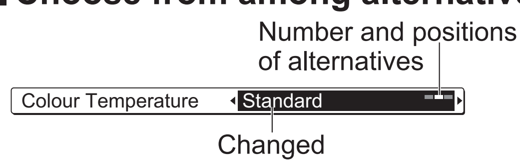
■ To return to the previous screen



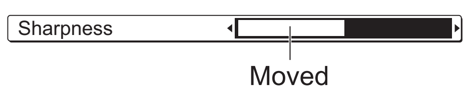
Note

- To initialize all settings ➡ "Shipping Condition" (p. 25)

■ Choose from among alternatives



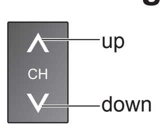
■ Adjust using the slide bar



■ Go to the next screen



■ To change menu pages



■ Overview

VIERA Main Menu

- VIERA Link
- Picture
- Sound
- Setup
- Language

VIERA Link Menu

VIERA Link Control	Recorder
Speaker Selection	Home Cinema

(p. 29)

The menu of the accessed equipment

Picture Menu 1/2

Menu	Dynamic
Contrast	
Brightness	
Colour	
Sharpness	
Tint	
Colour Temperature	Warm
CH Colour Set	
Colour Management	Off
P-NR	Off

Picture Menu 2/2

MPEG NR	Off
3D-COMB	Off
Reset to Default	Set

(p. 20)

Sound Menu

Menu	Music
Bass	12
Treble	12
Balance	
Headphone Volume	11
Surround	Off
Volume Correction	
HDMI1 Input	Auto
Reset to Default	Set

(p. 20)

Setup Menu 1/2

AV Colour System	Auto
Colour Matrix	SD
Child Lock	Access
Tuning Menu	Access
Off Timer	Off
Teletext	FASTEXT
Teletext Language	English
Shipping Condition	Access
Power Save	Off

Setup Menu 2/2

Side Panel	Off
Input Labels	Access
Banner Display Timeout	3 seconds
VIERA Link Settings	Access
Refresh Rate	100Hz
Software Licence	Access
System Information	Access

(p. 21)

Tuning Menu

Channel Selection	Position
Auto Tuning	Access
Programme Edit	Access
Manual Tuning	Access

(p. 22)

● Only available items can be selected.

How to Use Menu Functions

■ Menu list

Menu	Item	Adjustments / Configurations (alternatives)
VIERA Link	**VIERA Link Control**	Controls the connected Panasonic equipment "Easy control only with VIERA remote control" (p. 29) "Speaker control" (p. 29) ● You can also access VIERA Link Menu directly using the VIERA Link button on the remote control.
	Speaker Selection	
Picture	**Menu**	Basic picture mode **(Dynamic / Standard / Cinema)** ● Set for each input signal
	Contrast, Brightness, Colour, Sharpness	Adjusts colour, brightness, etc. for each picture mode to suit your taste
	Tint	Adjusts tint of image ● For NTSC signal reception only
	Colour Temperature	Chooses the colour balance of the entire image **(Cool / Standard / Warm)**
	CH Colour Set	Colour density varying between broadcast channels can be adjusted to three levels for each reception channel ● Select the channel you want to adjust and set this function
	Colour Management	Automatically adjusts colours to vivid ones **(Off / On)** ● Not valid on PC signal
	P-NR	Picture Noise Reduction Automatically reduces unwanted picture noise **(Off / Weak / Strong / Auto)** ● Not valid on HDMI or PC signal
	MPEG NR	Automatically reduces noise for watching DTV, DVD and VCD **(Off / Weak / Mid / Strong)**
	3D-COMB	Automatically makes still pictures and slow pictures look more vivid **(Off / On)** ● For PAL or NTSC signal reception only ● Not valid on S-Video, components, PC and HDMI
	Reset to Default	Press the OK button to reset the present Picture Menu to the default settings
Sound	**Menu**	Basic sound mode **(Music / News / Cinema)** ● Set for each input signal
	Bass	Adjusts the output level of deep bass
	Treble	Adjusts the output level of high-pitch, shrill sound
	Balance	Adjusts volume level of right and left speakers
	Headphone Volume	Adjusts the volume of the headphones
	Surround	Surround sound settings **(Off / On)** ● Switching is also possible by the Surround button on the remote control (p. 7)
	Volume Correction	Adjusts volume of individual channel or input mode
	HDMI1 Input	Select to fit the input signal **(Auto / Digital / Analogue)** (p. 34) Auto : Automatic detection of digital or analogue sound source Digital : HDMI cable connection Analogue : HDMI-DVI adapter cable connection ● HDMI input mode only ● HDMI2 terminal is for digital signal only ● No setting for HDMI2 available
	Reset to Default	Press the OK button to reset the present Sound Menu to the default settings

■ Menu list

Menu		Item	Adjustments / Configurations (alternatives)
Setup		AV Colour System	Selects optional colour system based on video signals in AV mode **(Auto / PAL / SECAM / NTSC4.43 / NTSC3.58)**
		Colour Matrix	Available only with 480p or 576p input signals in a natural colour from digital equipment connected to AV2 / AV3 Component or HDMI1 / HDMI2 terminals Select SD or HD to adjust suitable colour parameters for SD (standard definition) or HD (high definition) ● SD: Input signal is a normal TV system ● HD: Input signal is a High-Definition system
		Child Lock	Locks a programme channel to prevent access to it (p. 24)
	Tuning Menu	Channel Selection	Selects the most easily viewed channel selection method **(Position / Direct)** (p. 22)
		Auto Tuning	Automatically sets the channels received in the area (p. 23)
		Programme Edit	Edits channels (p. 23)
		Manual Tuning	Sets the channels manually (p. 22)
		Off Timer	Sets the time the TV automatically turns Off **(Off / 15 / 30 / 45 / 60 / 75 / 90 minutes)**
		Teletext	Teletext display mode **(FASTEXT / List)** (p. 16)
		Teletext Language	Selects teletext language **(English / CIS / E.Europe / Persian)**
		Shipping Condition	Resets all settings, for example, when moving house (p. 25)
		Power Save	Reduces brightness of picture to economise on power consumption **(Off / On)**
		Side Panel	Increases the brightness of the side panel **(Off / Low / Mid / High)** ● The recommended setting is “High” to prevent panel “image retention”
		Input Labels	Labels or skips each input terminals (p. 26)
		Banner Display Timeout	Sets how long the information banner (p. 13) stays on screen ● 0 (No display) to 10 sec. in 1-sec. increments
	VIERA Link Settings	VIERA Link	Sets to use VIERA Link functions **(Off / On)** (p. 28)
		Power off Link	Set to “Set” to use Power off Link function **(No / Set)** (p. 29)
		Power on Link	Set to “Set” to use Power on Link function **(No / Set)** (p. 29)
		Refresh Rate	Changes the image processing of the panel (depending on the input signal) **(50Hz / 100Hz)** ● Set to “100Hz” normally
		Software Licence	Displays the software licence information
		System Information	Displays the system information of this TV

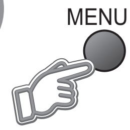
● A different menu will be displayed while PC is used. (p. 27)
● Only available items can be selected.

Editing and Setting Channels

The current channel settings can be changed according to your needs and reception conditions.

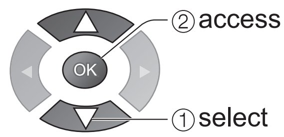


1 Display the menu

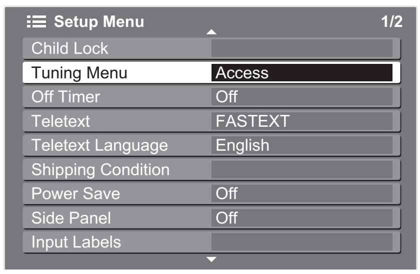


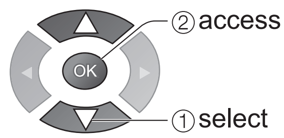
2 Select “Setup”



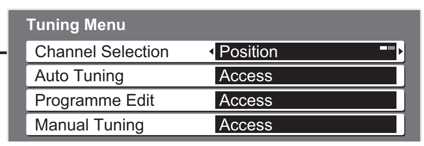


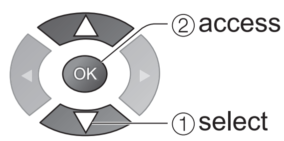
3 Select “Tuning Menu”





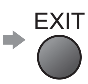
4 Select a function





5 Set

■ To return to TV



Channel Selection

■ Position

Example

Programme Number	Channel Display	Received Channel
1	2	2
2	4	4
3	6	6
4	8	8
5	10	10
6	12	12
7	14	14
8	16	16
9	18	18
10	20	20

When Channel Selection is on Position, and Auto Tuning is performed, the TV memorises the channels tuned in order from Programme Number 1. During Position mode various reception channels can be viewed.

■ Direct

Example

Programme Number	Channel Display	Received Channel
1	–	–
2	2	2
3	–	–
4	4	4
5	–	–
6	6	6
7	–	–
8	8	8
9	–	–
10	10	10

When Channel Selection is on Direct, and Auto Tuning is performed, the TV memorises the Programme Number which is the same as the channel tuned. The Channel Display numbers for the broadcast stations in each region are listed on p. 32.

Set channels manually

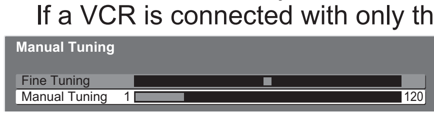
Manual Tuning

■ Fine Tuning

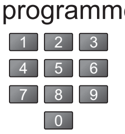
Use to make small adjustments to the tuning of an individual channel (affected by weather conditions, etc.)

■ Manual Tuning

Set channel manually after Auto Tuning.
If a VCR is connected with only the RF cable, select programme position “0”.



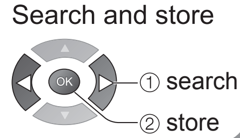
Select the programme position



Select the channel



Search and store



Set channels automatically

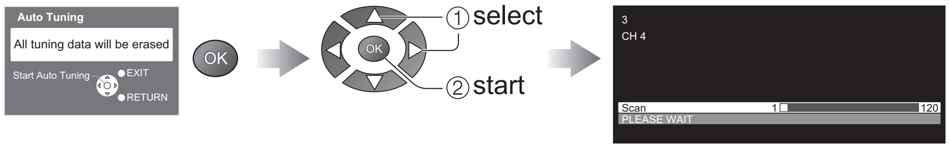
Auto Tuning

Automatically set the channels received in the area.
If a Child Lock PIN number (p. 24) has been set, it must be entered.

① **Select the channel selection method (Position / Direct)**
➡ "Channel Selection" (p. 22)

② **Start Auto Tuning**

Access "Auto Tuning" **Select your system** **Settings are made automatically**



System Selection	REGION
China	China
HK/UK	Hong Kong, United Kingdom
Asia/M.East	Malaysia, Singapore, Thailand, Asia countries, Kuwait, Saudi Arabia, United Arab Emirates, Middle East countries, etc.
NZ/INDONES	New Zealand, Indonesia, etc.
Australia	Australia
E.Europe	CIS, Poland, etc.
SPECL Ver	South Africa
America	USA, Chile, Mexico, Panama, Pelu, Philippines, Taiwan, Venezuela, etc.
CATV	USA CATV
Japan	Japan

- All previous settings are erased.
- When the operation is completed, the broadcast of programme number "1" will appear.
- If tuning has not done completely ➡ "Manual Tuning" (p. 22)

For Auto Tuning, using the buttons on the front of the TV

- Not available when Child Lock is set (p. 24)

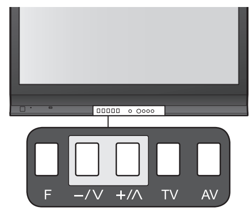
① Press repeatedly until "Auto Tuning" appears ➡ F

② Access "Auto Tuning" ➡ TV (twice)

③ Select your system ➡ −/V or +/Λ

④ Start "Auto Tuning" ➡ TV

■ **To return to TV** ➡ F



Edit channels

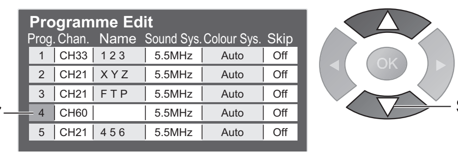
Programme Edit

- ■ Delete
- ■ Add
- ■ Move
- ■ Change name
- ■ Change sound system
- ■ Change colour system
- ■ Skip

Edit the programme position settings

- To change channel number ➡ "Manual Tuning" (p. 22)

① **Select the channel to edit**





② **Edit**

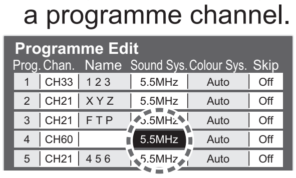
■ **To delete** ➡ R
➡ After confirming, press R

■ **To add** ➡ G
➡ After confirming, press G

■ **To move** ➡ Y
➡ Select new position ➡ Y

■ **To change sound system based on signals**

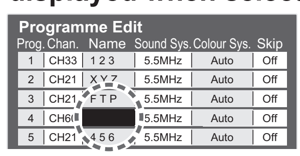
- If the sound is weak or distorted, change the sound system used for a programme channel.



Select the "Sound Sys." field

Select sound system

■ **To change the name of the broadcaster displayed when selecting channels**



(Maximum: five characters)

Select the "Name" field

R Enter the "User Input" mode

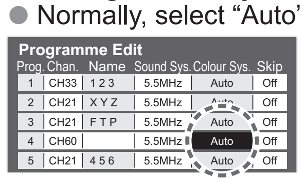
Select the character

OK Set

RETURN Store

■ **To change colour system based on signal**

- Normally, select "Auto"

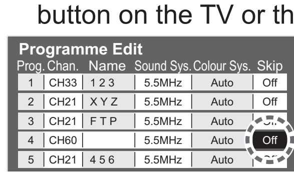


Select the "Colour Sys." field

Select colour system

■ **To skip the channel**

- This function is only effective when pressing the Programme Up / Down button on the TV or the remote control.

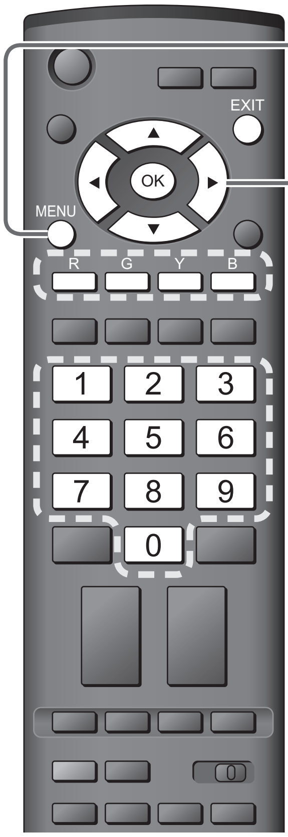


Select the "Skip" field

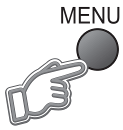
Select "On"

Control Channel Audience

You can lock specific channels and control who watches them.
(When a channel is selected, a message appears; by entering the PIN number, you can watch the channel.)



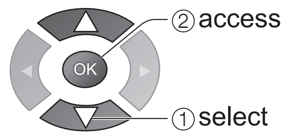
1 Display the menu



2 Select “Setup”

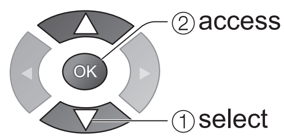
VIErA Main Menu

- VIERA Link
- Picture
- Sound
- Setup
- Language



3 Select “Child Lock”

Setup Menu	1/2
Child Lock	Access
Tuning Menu	
Off Timer	Off
Teletext	FASTEXT
Teletext Language	English
Shipping Condition	
Power Save	Off
Side Panel	Off
Input Labels	



■ To return to TV

➡ EXIT

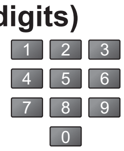
4 Set

Control channel audience

Child Lock

① Enter the PIN number (4 digits)

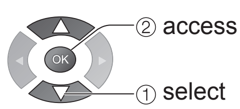
Child Lock-PIN Entry
Please enter new PIN
PIN * * * *



- Enter the PIN number twice at first setting.
- Make a note of the PIN number in case you forget it.

② Select “Service List”

Child Lock	
Change PIN	
Service List	Access

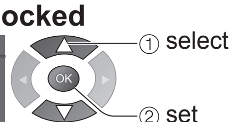


③ Select the channel to be locked

Child Lock Service List

Service Name	Lock
1 BBC	🔒
7 THREE	🔒
14 E4	
70 CBBC	
72 Nwk	
80 BBCi	🔒
85 Radio	
90 Cymru	

Appears when the channel is locked



- To cancel
  ➡ Select the locked channel
  ➡ OK
- To lock all channels ➡ Y
- To cancel all channel locks ➡ B

■ To change the PIN number

Select “Change PIN” in ② and enter a new PIN number twice.

Note

- Setting “Shipping Condition” (p. 25) erases the PIN number and all settings.

Restore Settings

Resets the TV to its original condition, i.e. no channels tuned in.
All settings (channels, picture, sound quality, etc.) are reset.

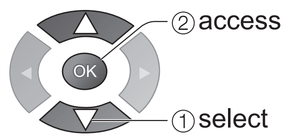


1 Display the menu

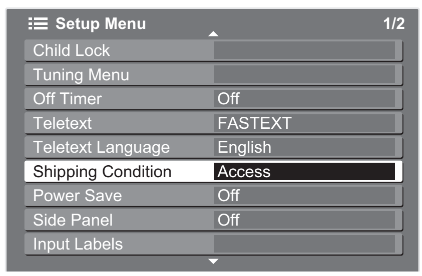


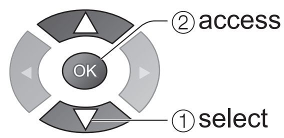
2 Select "Setup"





3 Select "Shipping Condition"





4 Set

■ **To return to TV**

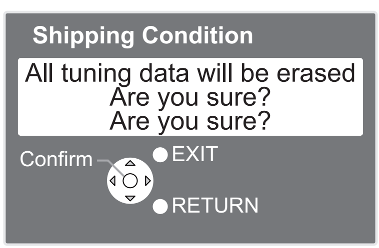
➡ EXIT



Restore Settings

Shipping Condition

① **Check the message and initialise**





② **Follow the on-screen instructions**

● "Auto Tuning" will automatically start. (p. 9)

■ **To re-tune TV channels only, e.g. after moving house**

➡ "Auto Tuning" (p. 23)

Input Labels

For easier identification and selection of the input mode, you can label each input terminals or skip terminal that is not connected to any equipment.
(To select the input mode ➡ p. 14)



1 Display the menu

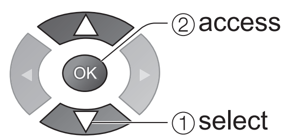
MENU



2 Select "Setup"

Main Menu

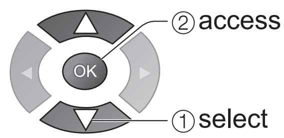
VIERA Link
Picture
Sound
Setup
Language



3 Select "Input Labels"

Setup Menu 1/2

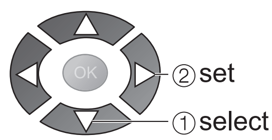
Child Lock	
Tuning Menu	
Off Timer	Off
Teletext	FASTEXT
Teletext Language	English
Shipping Condition	
Power Save	Off
Side Panel	Off
Input Labels	Access



4 Select a input terminal and set

Input Labels

AV1	DVD
AV2	AV2
AV3	AV3
AV4	AV4
PC	PC
HDMI1	HDMI1
HDMI2	HDMI2



The labels you set will be displayed in "Input Selection" menu (p. 14) or banner.

- If "Skip" is selected, you cannot select the mode.

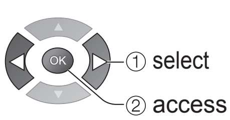
■ To return to TV

➡ EXIT

■ User Input

You can name each input terminals freely.

Select "User Input"



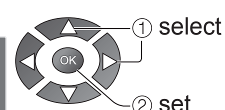
Set characters

User Input

Name AV1

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
U	V	W	X	Y	Z		0	1	2	3	4	5	6	7	8	9	!	:	#
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t
u	v	w	x	y	z	(	)	+	-	.	*	_							

(maximum: ten characters)

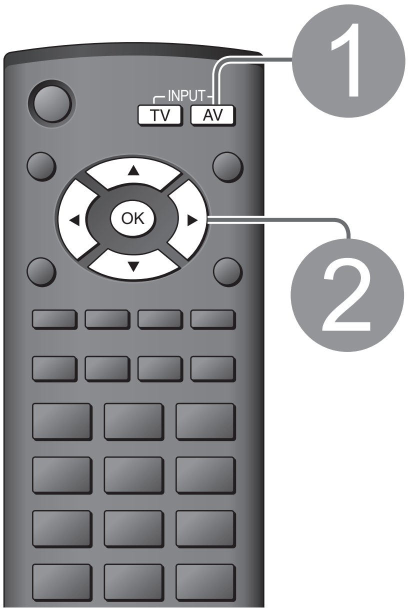


Store

➡ RETURN

Displaying PC Screen on TV

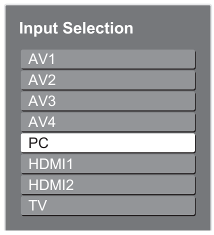
The screen of the PC connected to the TV can be displayed on the TV.
You can also listen to PC sound with the audio cable connected. To connect PC (p. 30)

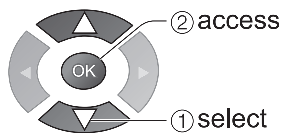


1 Select the external input



2 Select "PC"





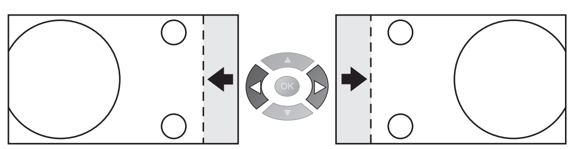
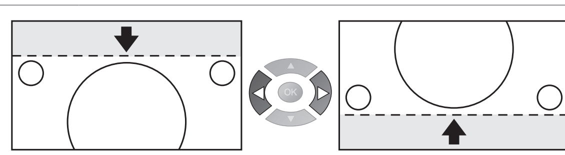
- Corresponding signals (p. 35)
- If "H-freq." or "V-freq." is shown in red, the signals may not be supported.

■ **To return to TV**

➡ TV

■ **PC menu setting** (changed as desired)

- To make settings ➡ "How to Use Menu Functions" ❶ to ❹ (p. 18)

Menu	Item		Adjustments / Configurations (options)
Picture	Advanced PC Settings	W/B High R	White balance of bright red area — ① (① and ② repeatedly adjusted)
		W/B High B	White balance of bright blue area — ①
		W/B Low R	White balance of bright red area — ②
		W/B Low B	White balance of dark blue area — ②
		Gamma	**(2.0 / 2.2 / 2.5 / S Curve)**
Setup	PC Setup	Input Resolution	Switches to a wide view ● VGA (640 × 480 pixels), WVGA (852 × 480 pixels), XGA (1,024 × 768 pixels), WXGA (1,366 × 768 pixels) ● Options change depending on signals
		Clock	Set to the minimum level if noise occurs
		H-pos	Adjusts horizontal position 
		V-pos	Adjusts vertical position 
		Clock Phase	Eliminates flicker and distortion ● Adjust after Clock adjustment ● Set to the minimum level if noise occurs
		Sync	Chooses another synchronous signal if the image is distorted **(H & V / On G)** ● H & V : by the horizontal and vertical signals from your PC On G : by the green signal from your PC (if available)

- Other items ➡ p. 20 and p. 21

VIERA Link "HDAVI Control™"∗

∗Enjoy additional HDMI Inter-Operability with Panasonic products which have "HDAVI Control" function.
This TV supports "HDAVI Control 2" function.
Connections to some Panasonic equipment (DVD Recorder DIGA, HD Video Camera, Player theatre, etc.) with HDMI cables allow you to interface them automatically.
The equipment with "HDAVI Control" function enables the following operations:

- Easy playback (p. 29)
- Power on Link (p. 29)
- Power off Link (p. 29)
- Speaker control (p. 29)

In addition, the equipment with "HDAVI Control 2" function enables the following operation:

- Easy control only with VIERA remote control (p. 29)

These features are limited to models incorporating Panasonic's "HDAVI Control" and "VIERA Link".
VIERA Link "HDAVI Control", based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers' equipment that supports HDMI CEC cannot be guaranteed.
Refer to individual manuals for compatibility information. About applicable equipment, consult your local Panasonic dealer.

■ HDMI cable

This function needs an HDMI compliant (fully wired) cable. Non-HDMI-compliant cables cannot be utilized.
It is recommended that you use Panasonic's HDMI cable. Recommended part number:

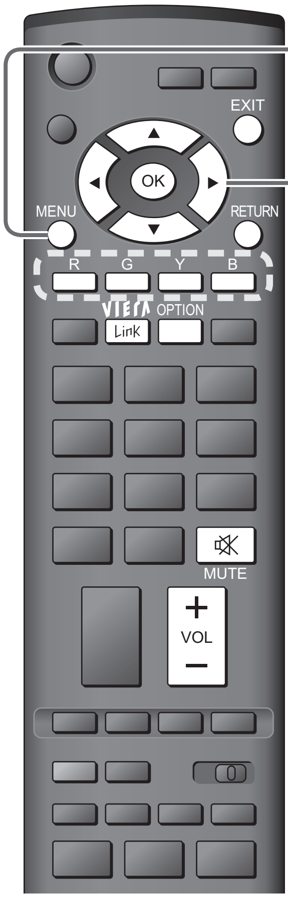
- RP-CDHG15 (1.5 m)
- RP-CDHG30 (3.0 m)
- RP-CDHG50 (5.0 m)

■ Preparations

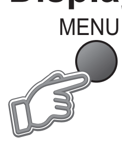
Setup the equipment to enable this function. Read the manuals of the equipment.
About connections, see "External Equipment" (p. 31). Read the manuals of the equipment too.

■ For the first time / When adding new equipment, reconnecting equipment or changing setup

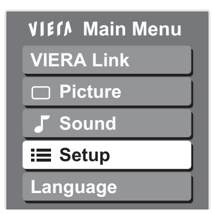
After connection turn the equipment on and then switch the TV on.
Select the input mode to HDMI1 or HDMI2 (p. 14), and make sure that an image is displayed correctly.

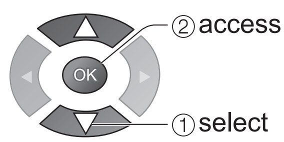


1 **Display the menu**

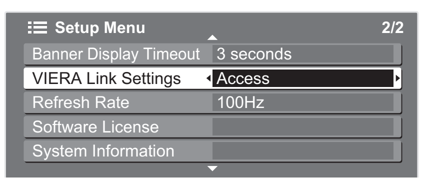


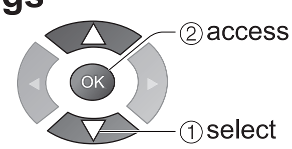
2 **Select "Setup"**



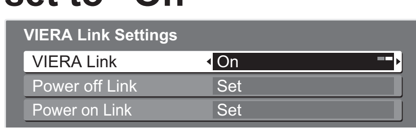


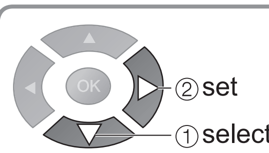
3 **Select "VIERA Link Settings"**





4 **Select "VIERA Link" and set to "On"**





Easy control only with VIERA remote control

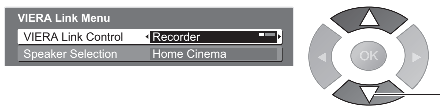
You can control some functions of the connected Panasonic equipment with this TV remote control (point the remote control at the TV's signal receiver).

● If you cannot access the menu, check the settings and the equipment (p. 28).

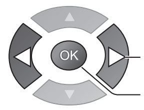
Access the menu of the equipment

① **Display "VIERA Link Menu"** ➡ VIERA Link

② **Select "VIERA Link Control"**

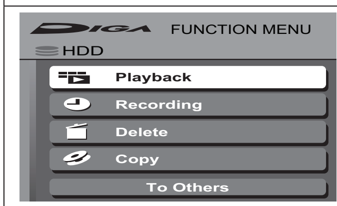
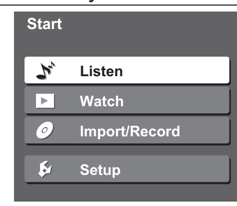


③ **Select the equipment you want to access**



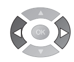
④ **Operate the menu of the equipment**

● Example:

DVD Recorder DIGA	HD Video Camera	Player theatre
		

● About the operations for the equipment, read the manual of the equipment.

● Available VIERA remote control buttons: (depending on the connected equipment)

	Move the cursor / select the menu
	Move the cursor / access / adjust
OK	Store / Set / Access
RETURN	Return to the previous menu
EXIT	Exit the menu
OPTION	The same functions with the OPTION button of the equipment
R G Y B	Access when the key words are displayed on colour bar

Easy playback

Automatic Input switching-When the connected Panasonic equipment is operated, input mode is switched automatically. When it is stopped operating, input mode is not returned.

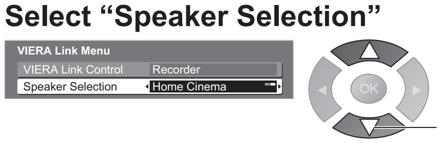
Speaker control

You can control the theatre speaker with TV's remote control.
This function is available when Panasonic Player theatre is connected.

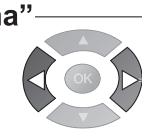
● If you cannot access the menu, check the settings and the equipment (p. 28).

① **Display "VIERA Link Menu"** ➡ VIERA Link

② **Select "Speaker Selection"**



③ **Set to "Home Cinema" or "TV"**



■ **Home Cinema**
Adjustment for equipment (automatically turned on if it is in Standby mode).

Volume up / down ➡ + VOL −

Mute ➡ MUTE

● The sound of TV speakers is mute.
● When the equipment is turned off, TV speakers will be active.

■ **TV**
TV speakers are active.

Power on Link

Set to "Set"
➡ When the connected Panasonic equipment starts playback or direct navigator / function menu for the equipment are activated, the TV is automatically turned on. (Only when TV is in Standby mode.)

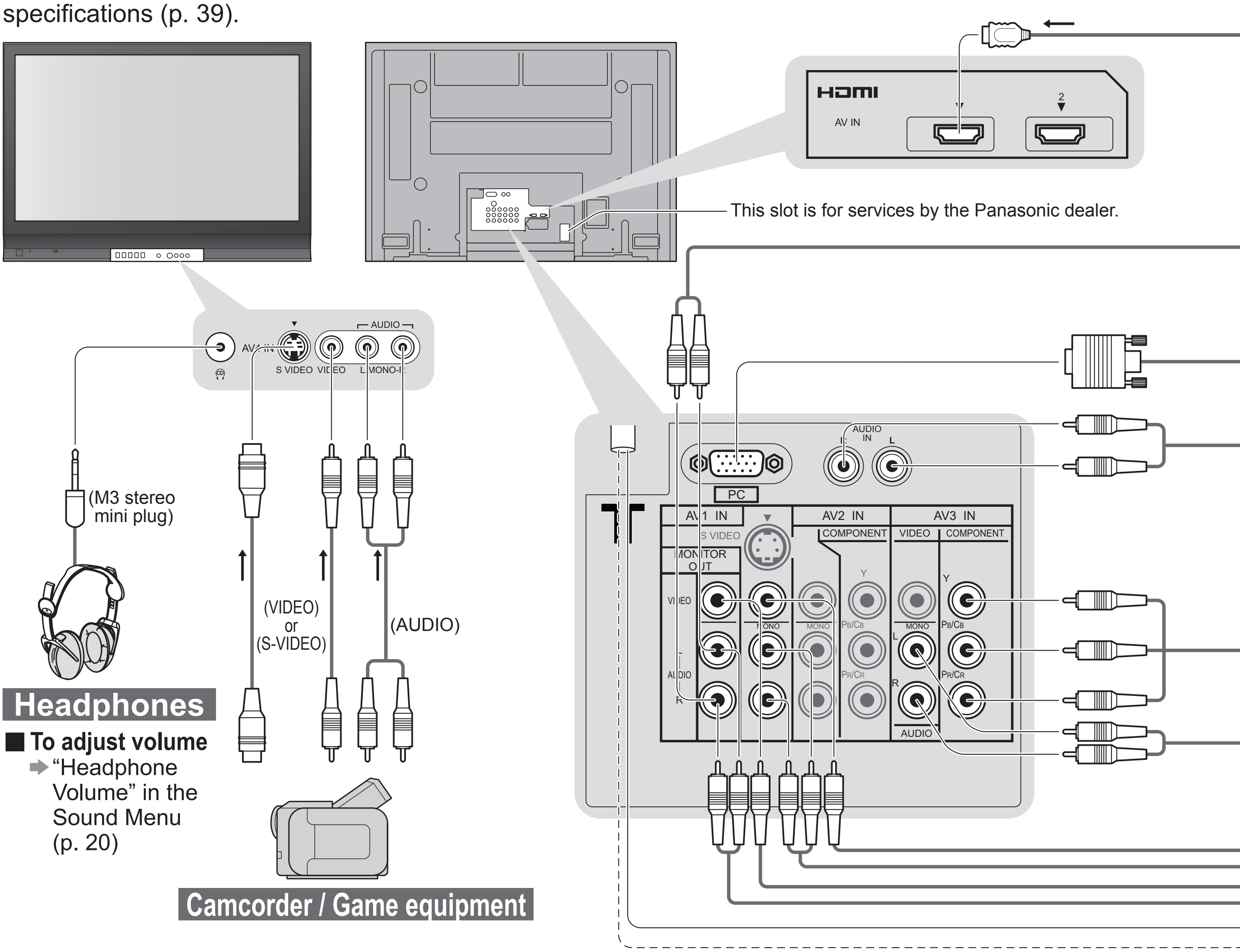
Power off Link

Set to "Set"
➡ When TV is set to Standby mode, the connected Panasonic equipment is also automatically set to Standby.
● This function will work even if the TV enters standby mode automatically by Off Timer function or auto power standby function.

● The TV remains on even if the "VIERA Link" compatible equipment is turned off.

External Equipment

These diagrams show our recommendations for how to connect the TV to your various equipment. For other connections, consult the instructions for each piece of equipment, the table below, and the specifications (p. 39).

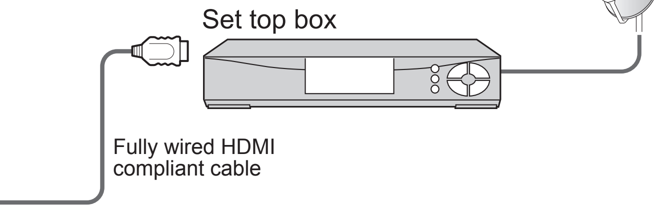


■Types of connectable equipment to each connector

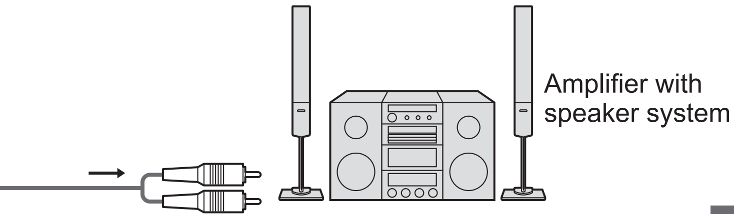
Connector / Recording / Playback (equipment)	AV1 IN	AV2 IN	AV3 IN	AV4 IN (Front of TV)	MONITOR OUT	HDMI 1	HDMI 2
■To record / playback videocassettes / DVDs (VCR / DVD recorder)	○	○	○	○	○		
■To watch DVDs (DVD player)	○	○	○	○		○	○
■To watch camcorder images (Video camera)	○	○	○	○		○	○
■To watch satellite broadcasts (Set top box)	○	○	○	○		○	○
■To play games (Game equipment)	○	○	○	○			
■To use amplifier with speaker system					○		
■VIERA Link						○	○

○: Recommended Connection

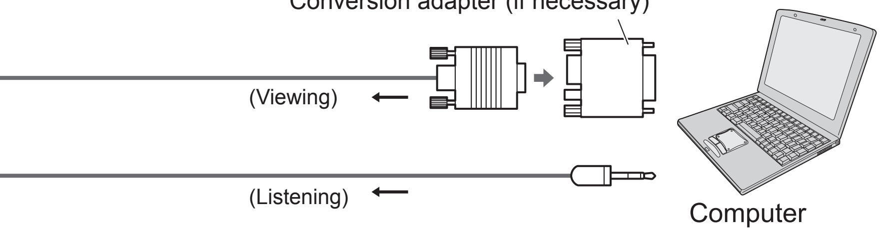
To watch satellite broadcasts



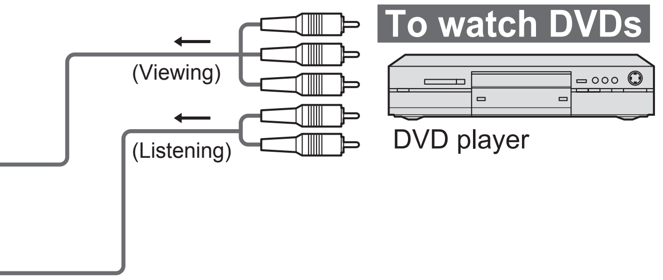
To listen with speakers



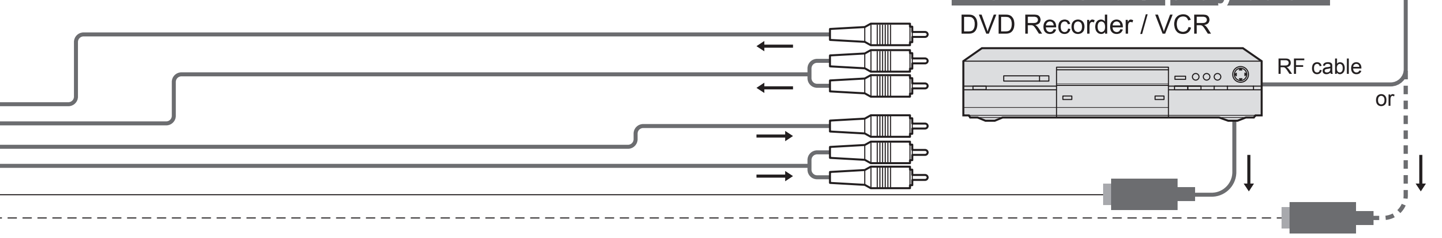
PC



To watch DVDs



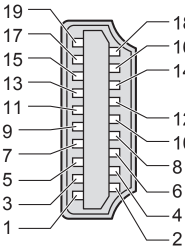
To record / playback



S VIDEO 4 pin terminal



HDMI terminal

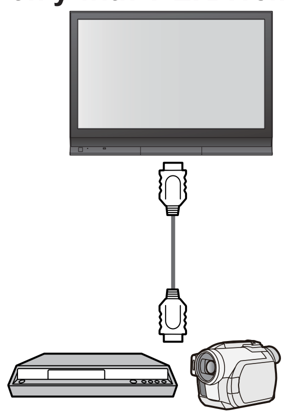


- Connect the S-VIDEO or VIDEO terminal when using AV1 / AV4 IN terminals.
- Connect the COMPONENT or VIDEO terminal when using AV2 / AV3 IN terminals.

VIERA Link (p. 28)

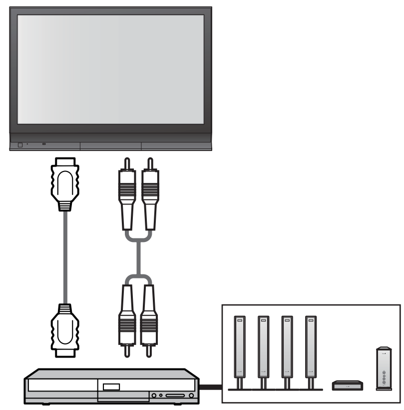
- Use fully wired HDMI compliant cable.
- Read the manuals of the equipment too.

■ Easy playback, Easy control only with VIERA remote control



Panasonic DVD Recorder, HD Video Camera, etc.

■ Home Cinema



Panasonic Player theatre

Speaker system

External Equipment

Advanced

Technical Information

Channel Allocation

System Selection	China	HK/UK	Asia/M.East	NZ/INDONES	Australia	E.Europe	SPECL Ver	America	CATV	Japan
CH DISPLAY	RECEIVE CHANNEL									
0	–	–	–	–	–	–	–	–	–	–
1	1	–	–	1	0	1	1	–	1	1
2	2	–	2	2	1	2	2	2	2	2
3	~	–	~	~	2	~	~	~	~	~
4	~	–	~	~	3	~	~	~	~	~
5	~	–	~	~	4	~	~	~	~	~
6	~	–	~	~	5	~	~	~	~	~
7	~	–	~	~	S2	~	~	~	~	~
~	~	–	~	~	~	~	~	~	~	~
11	~	–	11	11	~	11	11	~	~	~
12	12	–	12	–	~	12	12	~	~	12
13	13	–	–	–	~	–	13	13	~	13
14	~	–	–	–	~	–	–	14	~	~
15	~	–	–	–	S10	–	–	~	~	~
16	~	–	–	–	6	–	–	~	~	~
~	~	–	–	–	~	–	–	~	~	~
19	~	–	–	–	9	–	–	~	~	~
20	~	–	–	–	9A	–	–	~	~	~
21	~	21	21	21	10	21	21	~	~	~
22	~	~	~	~	11	~	~	~	~	~
23	~	~	~	~	12	~	~	~	~	~
24	~	~	~	~	S11	~	~	~	~	~
~	~	~	~	~	~	~	~	~	~	~
28	~	~	~	~	~	~	~	~	~	~
~	~	~	~	~	~	~	~	~	~	~
57	57	~	~	~	S44	~	~	~	~	~
58	–	~	~	~	20	~	~	~	~	~
59	–	~	~	~	21	~	~	~	~	~
~	–	~	~	~	~	~	~	~	~	~
62	–	62	62	62	~	62	62	62	62	62
63	–	63	63	63	~	63	63	63	63	C13
~	–	~	~	~	~	~	~	~	~	~
69	–	69	69	69	~	69	69	69	~	~
70	–	–	–	–	~	–	–	–	~	~
~	–	–	–	–	~	–	–	–	~	~
73	–	–	–	–	~	–	–	–	~	~
74	–	S'1	S'1	S'1	~	S'1	S'1	–	~	~
75	–	S'2	S'2	S'2	~	–	S'2	–	~	~
76	–	S'3	S'3	S'3	~	–	S'3	–	~	~
77	–	–	–	–	~	–	–	–	~	~
78	–	–	–	–	~	–	–	–	~	~
79	–	–	–	–	~	–	–	–	~	~
80	–	S1	S1	S1	~	S1	S1	–	~	~
81	Z1	S2	S2	S2	~	S2	S2	–	~	~
~	~	~	~	~	~	~	~	–	~	~
89	Z9	S10	S10	S10	~	S10	S10	–	~	~
90	Z10	S11	S11	S11	~	S11	–	–	~	~
91	Z11	S12	S12	S12	~	S12	–	–	~	~
92	Z12	S13	S13	S13	~	S13	–	–	~	~
93	Z13	S14	S14	S14	~	S14	S14	–	~	~
94	Z14	S15	S15	S15	~	S15	S15	–	~	~
95	Z15	S16	S16	S16	~	S16	S16	–	~	~
96	Z16	S17	S17	S17	~	S17	S17	–	~	~
97	Z17	S18	S18	S18	~	S18	S18	–	~	~
98	Z18	S19	S19	S19	~	S19	S19	–	~	~
99	Z19	S20	S20	S20	~	S20	S20	–	99	C49
100	Z20	S21	S21	S21	~	S21	S21	–	100	–
~	~	~	~	~	~	~	~	–	~	–
107	~	~	~	~	69	~	~	–	~	–
~	~	~	~	~	–	~	~	–	~	–
117	Z37	~	~	~	–	~	~	–	~	–
118	–	~	~	~	–	~	~	–	~	–
~	–	~	~	~	–	~	~	–	~	–
120	–	S41	S41	S41	–	S41	S41	–	~	–
~	–	–	–	–	–	–	–	–	~	–
125	–	–	–	–	–	–	–	–	125	–

Aspect Ratio

The optimum size and aspect can be chosen, and you can enjoy finer images. (p. 13)

Signal name		Aspect modes						
		16:9	Just	4:3	4:3 Full	Zoom1	Zoom2	Zoom3
TV/AV1/AV2/AV3/AV4	PAL	O	O	O	–	O	O	O
	PAL 525/60	O	O	O	–	O	O	O
	NTSC 4.43	O	O	O	–	O	O	O
	NTSC 3.58	O	O	O	–	O	O	O
Component/HDMI	525(480)/60i	O	O	O	–	O	O	O
	525(480)/60p	O	O	O	–	O	O	O
	625(576)/50i	O	O	O	–	O	O	O
	625(576)/50p	O	O	O	–	O	O	O
	750(720)/50p	O	O	O	O	O	O	O
	750(720)/60p	O	O	O	O	O	O	O
	1125(1080)/50i	O	O	O	O	O	O	O
	1125(1080)/60i	O	O	O	O	O	O	O
	1125(1080)/50p	O	O	O	O	O	O	O
	1125(1080)/60p	O	O	O	O	O	O	O
PC input		O	–	O	–	–	–	–

Note

- The ratio varies depending on the programme, etc. If the ratio is greater than the standard "16:9", black bands may appear at the top and bottom of the screen.
- If the screen size looks unusual when a widescreen-recorded programme is played back on a VCR, adjust the tracking of the VCR. (See the VCR manual.)
- To select the ratio manually: (Only “16:9” or “4:3” in PC mode)

16:9



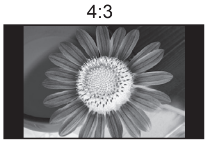
Directly displays the image at “16:9” without distortion (anamorphic).

Just



Displays a 4:3 image full-screen. Stretching is only noticeable at the left and right edges.

4:3



Displays the image at the standard “4:3” without distortion.

4:3 Full



Displays a “4:3” image enlarged horizontally to fit the screen.

Zoom1



Displays a “16:9” letterbox or “4:3” image without distortion.

Zoom2



Displays a “16:9” letterbox (anamorphic) image full-screen without distortion.

Zoom3



Displays a “2.35:1” letterbox (anamorphic) image full-screen without distortion. At “16:9”, displays the image at its maximum (with slight enlargement).

VIERA Link “HDAVI Control™”

HDMI connections to some Panasonic equipment allow you to interface them automatically. (p. 28)

- This function may not work normally depending on the equipment condition.
- Image or sound may not be available for the first few seconds when the playback starts.
- Image or sound may not be available for the first few seconds when Input mode is switched.
- Volume function will be displayed when adjusting the volume of the equipment.
- Easy playback is also available by using the remote control for Player theatre. Read the manuals of the equipment.
- If you connect the same kind of equipment at once (for example: one DIGA to HDMI1 / another DIGA to HDMI2), VIERA Link is available for the terminal with the smaller number.
- “HDAVI Control 2” is the newest standard (current as of February, 2007) for Panasonic’s HDAVI Control compatible equipment. This standard is compatible with Panasonic’s conventional HDAVI equipment.

Technical Information

Stereo / Bilingual Sound Selection

ↀ/▽ I/II When you receive the stereo / bilingual sound system, sound output modes can be selected by pressing the **Stereo / Bilingual Sound Selection** button.

Audio Signal	STEREO	MAIN I	SUB II	MONO
Mode Indicator	ↀ	I	II	▽

NICAM ....Used in New Zealand, Singapore, Hong Kong etc.

Type of broadcast	Regular broadcast (Standard Audio)	Regular + NICAM MONO I (MAIN I)	NICAM STEREO	NICAM DUAL MONO (MAIN I / SUB II)
Mode Indicator	No Indicator ↔ ▽	I ↔ ▽	ↀ ↔ ▽	I → II → ▽ → I

A2(German) ....Used in Australia, Malaysia etc.

Type of broadcast	Regular broadcast (Standard Audio)	BILINGUAL or DUAL MONO: MAIN I / SUB II	STEREO
Mode Indicator	No Indicator ↔ ▽	I ↔ II	ↀ ↔ ▽

Note

- If the stereo signal is poor or the receiving conditions are not optimum or if STEREO:MONO automatic switching occurs, it is recommended you switch from STEREO to MONO.
- Even when the contents of the receiving signal undergo changes, selection mode is kept intact.
- When the receiving conditions deteriorate, listening will be easier if the mode is set to the MONO position, using the stereo / bilingual sound selection button.
- DUAL, also known as DUAL MONO or as BILINGUAL is not currently transmitted in some countries.

HDMI connection

HDMI (high-definition multimedia interface) allows you to enjoy high-definition digital images and high-quality sound by connecting the TV and the equipment.
HDMI-compatible equipment (∗1) with an HDMI or DVI output terminal, such as a set top box or a DVD player, can be connected to the HDMI terminal using an HDMI compliant (fully wired) cable.
About connections, see “External Equipment” (p. 30).

Note

- HDMI is the world’s first complete digital consumer AV interface complying with a non-compression standard.
- If the external equipment has only a DVI output, connect to the HDMI1 terminal via a DVI to HDMI adapter cable (∗2).
- When the DVI to HDMI adapter cable is used, connect the audio cable to the audio input terminal (HDMI1: use AUDIO IN terminals).
- Audio settings can be made on the “HDMI1 Input” menu screen. (p. 20)
- Applicable audio signal sampling frequencies (2ch L.PCM): 48 kHz, 44.1 kHz, 32 kHz
- HDMI2 terminal is for digital audio signal only.
- Use with a PC is not assumed.
- If the connected equipment has an aspect adjustment function, set the aspect ratio to “16:9”.
- These HDMI connectors are “type A”.
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- An equipment having no digital output terminal may be connected to the input terminal of either “Component”, “S-VIDEO”, or “Video” to receive analogue signals.
- The HDMI input terminal can be used with only the following image signals:
  480i, 480p, 576i, 576p, 720p, 1080i and 1080p. Match the output setting of the digital equipment.
- For details of the applicable HDMI signals, see p. 35.

(∗1): The HDMI logo is displayed on HDMI-compliant equipment.
(∗2): Enquire at your local digital equipment retailer shop.

PC connection

A PC may be connected to this TV so that the PC screen is displayed and sound is heard from the TV.

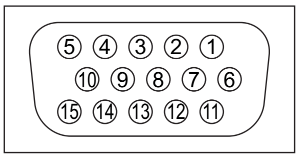
- PC signals that can be inputted: Horizontal scanning frequency 31 to 69 kHz; vertical scanning frequency 59 to 86 Hz (more than 1,024 signal lines could result in incorrect display of the image).
- A PC adapter is not necessary for the DOS/V-compliant D-sub 15-pin connector.

Note

- Some PC models cannot be connected to this TV.
- When using PC, set the colour display quality of PC to the highest position.
- For details of the applicable PC signals, see below.
- Max. display resolution

Aspect \ Model No.	TH-37PV70AZ	TH-42PV70AZ	TH-50PV70AZ
4:3	768 × 720 pixels	768 × 768 pixels	1,024 × 768 pixels
16:9	1,024 × 720 pixels	1,024 × 768 pixels	1,366 × 768 pixels

- D-sub 15-pin connector signal



Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	R	⑥	GND (Ground)	⑪	NC (not connected)
②	G	⑦	GND (Ground)	⑫	NC (not connected)
③	B	⑧	GND (Ground)	⑬	HD
④	NC (not connected)	⑨	NC (not connected)	⑭	VD
⑤	GND (Ground)	⑩	GND (Ground)	⑮	NC (not connected)

Input signal that can be displayed

COMPONENT (Y, PB/CB, PR/CR), HDMI

∗ Mark: Applicable input signal

Signal name	COMPONENT	HDMI
525 (480) / 60i	∗	∗
525 (480) / 60p	∗	∗
625 (576) / 50i	∗	∗
625 (576) / 50p	∗	∗
750 (720) / 60p	∗	∗
750 (720) / 50p	∗	∗
1,125 (1,080) / 60i	∗	∗
1,125 (1,080) / 50i	∗	∗
1,125 (1,080) / 60p		∗
1,125 (1,080) / 50p		∗

PC (D-sub 15P)

Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)
640 × 400 @70 Hz	31.47	70.07
640 × 480 @60 Hz	31.47	59.94
640 × 480 @75 Hz	37.50	75.00
800 × 600 @60 Hz	37.88	60.32
800 × 600 @75 Hz	46.88	75.00
800 × 600 @85 Hz	53.67	85.06
852 × 480 @60 Hz	31.44	59.89
1,024 × 768 @60 Hz	48.36	60.00
1,024 × 768 @70 Hz	56.48	70.07
1,024 × 768 @75 Hz	60.02	75.03
1,024 × 768 @85 Hz	68.68	85.00
1,280 × 1,024 @60 Hz	63.98	60.02
1,366 × 768 @60 Hz	48.39	60.04
Macintosh13” (640 × 480)	35.00	66.67
Macintosh16” (832 × 624)	49.73	74.55
Macintosh21” (1,152 × 870)	68.68	75.06

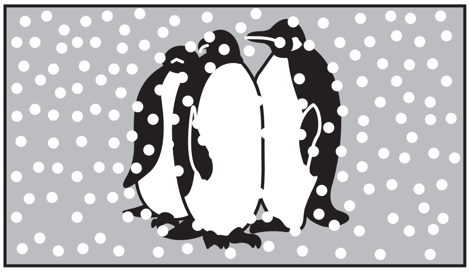
Note

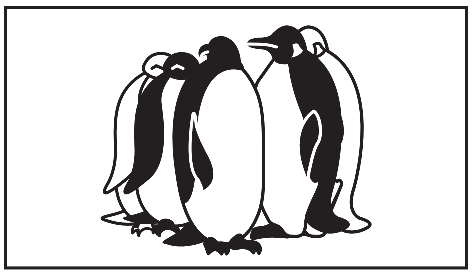
- Signals other than above may not be displayed properly.
- The above signals are reformatted for optimal viewing on your display.
- Applicable input signal for PC is basically compatible to VESA standard timing.
- PC signal is magnified or compressed for display, so that it may not be possible to show fine detail with sufficient clarity.

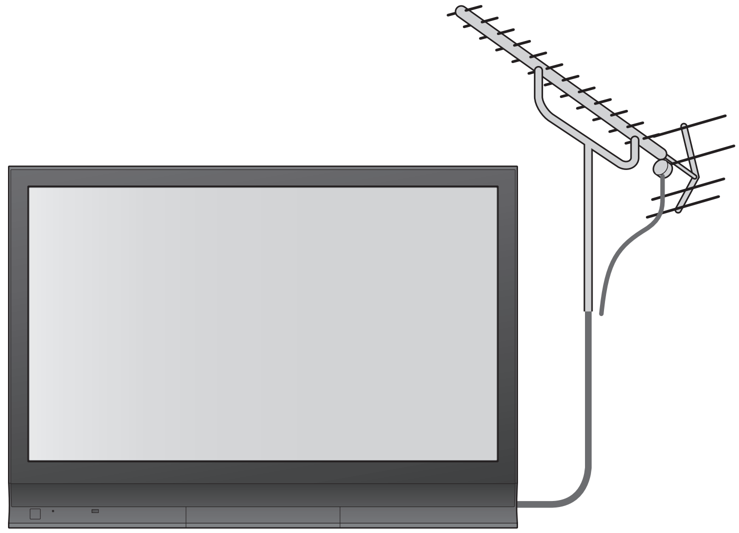
FAQs

Before requesting service or assistance, please follow these simple guides to resolve the problem.
If problem still persists, please contact your local Panasonic dealer for assistance.

White spots or shadow images (noise)







- Check the position, direction, and connection of the aerial.

Permanently lit spots on screen

- Due to production process involved in this technology this may result in some pixels which are permanently lit or unlit. This is not a malfunction.

Neither image nor sound is produced

- Is the TV in "AV mode"?
- Is the mains lead plugged into the socket outlet?
- Is the TV turned On?
- Check Picture Menu (p. 20) and volume.

Contrast is reduced

- Contrast is lowered when the following conditions without any user operation for a few minutes:
  - no signal in AV mode
  - selected locked channel
  - selected invalid channel
  - selected radio channel
  - displayed menu

An error message appears

- Follow the message's instructions.
- If the problem persists, contact the authorized Service Centre.

Category	Problem	Actions
Screen	**Chaotic image, noisy**	● Set "P-NR" in the Picture Menu (to remove noise). (p. 20) ● Check nearby electrical products (car, motorcycle, fluorescent lamp).
Screen	**No image can be displayed**	● Is "Colour" or "Contrast" in the Picture Menu set to the minimum? (p. 20) ● Check Colour system. (p. 23)
Screen	**Blurry or distorted image** (no sound or low volume)	● Reset channels. (p. 23)
Screen	**Unusual image is displayed**	● Turn off the TV with Mains power On / Off switch, then turn it on again.
Sound	**No sound is produced**	● Is "Sound mute" active? (p. 7) ● Is the volume set to the minimum?
Sound	**Sound level is low or sound is distorted**	● Sound signal reception may be deteriorated. ● Check Sound system. (p. 23)
HDMI	**Sound is unusual**	● Set the sound setting of the connected equipment to "2ch L.PCM". ● Check the "HDMI1 Input" setting in the Sound Menu. (p. 20) ● If digital sound connection has a problem, select analogue sound connection. (p. 34)
HDMI	**Pictures from external equipment are unusual when the equipment is connected via HDMI**	● Is the HDMI cable connected properly? (p. 30) ● Turn Off the TV and equipment, then turn them On again. ● Check an input signal from the equipment. (p. 35) ● Use an equipment compliant with EIA/CEA-861/861B.
Other	**TV goes into "Standby mode"**	● Off Timer function is activated. ● The TV enters "Standby mode" about 30 min. after broadcasting ends.
Other	**The remote control does not work**	● Are the batteries installed correctly? (p. 6) ● Has the TV been switched On?

Licence

Trademark Credits

- VGA is a trademark of International Business Machines Corporation.
- Macintosh is a registered trademark of Apple Computer, USA.
- S-VGA is a registered trademark of the Video Electronics Standard Association.
  Even if no special notation has been made of company or product trademarks, these trademarks have been fully respected.
- HDMI, the HDMI Logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- HDAVI Control™ is a trademark of Matsushita Electric Industrial Co., Ltd.

WARRANTY - New Zealand only

WE WARRANT that the Panasonic Television that you have purchased is free from defects in material and workmanship under normal home use and service.

Accordingly, we undertake to repair, or at our option, replace without cost to the owner, either for material or labour, any part which within 12 months from the date of delivery is found to be defective, provided that the appliance has been used for domestic purposes only and in accordance with the instructions given in the Instruction Book and not been subjected to misuse, neglect or installed, dismantled, repaired or serviced by any other than an authorised Panasonic New Zealand Dealer or Panasonic New Zealand Authorised Service Centre.

NOTE

- Before reporting a fault, please ensure that you read the item "Troubleshooting" in the information section of your Panasonic Instruction Book.
- It is important to retain your proof of purchase as this will be required by the serviceman or retailer as proof of purchase date, should service be required.
- In the event of service being required, contact your Panasonic New Zealand retailer or Panasonic New Zealand Authorised Service Centre.

IMPORTANT

Any request for warranty service must be through an Authorised Panasonic New Zealand Service Centre who during the period of the warranty, undertakes to make any necessary adjustment and fit any replacement part supplied by the manufacturer, during normal working hours, or alternatively will arrange for such service to be provided by some other Panasonic New Zealand Authorised Service Centre.

NEW ZEALAND

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Specifications

		TH-37PV70AZ	TH-42PV70AZ	TH-50PV70AZ
Power Source		AC 220-240 V, 50 / 60 Hz		
Power Consumption	**Average use**	310 W	341 W	519 W
	Standby condition	0.7 W	0.7 W	0.5 W
Display panel	**Aspect Ratio**	16:9		
	Visible screen size	94 cm (diagonal) 819 mm (W) × 457 mm (H)	106 cm (diagonal) 922 mm (W) × 518 mm (H)	127 cm (diagonal) 1,106 mm (W) × 622 mm (H)
	Number of pixels	737,280 (1,024 (W) × 720 (H)) [3,072 × 720 dots]	786,432 (1,024 (W) × 768 (H)) [3,072 × 768 dots]	1,049,088 (1,366 (W) × 768 (H)) [4,098 × 768 dots]
Sound	**Speaker**	120 mm × 60 mm × 2 pcs, 8 Ω		
	Audio Output	20 W (10 W + 10 W), 10% THD		
	Headphones	M3 (3.5 mm) stereo mini jack × 1		
PC signals		VGA, SVGA, XGA SXGA ······ (compressed) Horizontal scanning frequency 31 - 69 kHz Vertical scanning frequency 59 - 86 Hz		

Receiving Systems / Band name

17 Systems		Function
1	PAL B, G, H	Reception of broadcast transmissions and Playback from Video Cassette Tape Recorders
2	PAL I	
3	PAL D, K	
4	SECAM B, G	
5	SECAM D, K	
6	SECAM K1	
7	NTSC M (NTSC 3.58/4.5 MHz)	
8	NTSC 4.43/5.5 MHz	Playback from Special VCR's or DVD
9	NTSC 4.43/6.0 MHz	
10	NTSC 4.43/6.5 MHz	
11	NTSC 3.58/5.5 MHz	
12	NTSC 3.58/6.0 MHz	
13	NTSC 3.58/6.5 MHz	
14	SECAM I	
15	PAL 60 Hz/5.5 MHz	Playback from Special Disc Players and Special VCR's or DVD
16	PAL 60 Hz/6.0 MHz	
17	PAL 60 Hz/6.5 MHz	

Receiving Channels (Regular TV)

VHF BAND	UHF BAND	CATV
2-12 (PAL/SECAM B, K1)	21-69 (PAL G, H, I/SECAM G, K, K1)	S1-S20 (OSCAR)
0-12 (PAL B AUST.)	28-69 (PAL B AUST.)	1-125 (USA CATV)
1-9 (PAL B N.Z.)	13-57 (PAL D, K)	C13-C49 (JAPAN)
1-12 (PAL/SECAM D)	13-62 (NTSC M Japan)	S21-S41 (HYPER)
1-12 (NTSC M Japan)	14-69 (NTSC M USA)	Z1-Z37 (CHINA)
2-13 (NTSC M USA)		5A, 9A (AUST.)

			TH-37PV70AZ	TH-42PV70AZ	TH-50PV70AZ
Aerial - Rear			VHF / UHF		
Operating Conditions			**Temperature** : 0 °C - 35 °C **Humidity** : 20 % - 80 % RH (non-condensing)		
Connection Terminals	**AV1 Input**	**AUDIO L - R**	RCA PIN Type × 2	0.5 V[rms]	
		VIDEO	RCA PIN Type × 1	1.0 V[p-p] (75 Ω)	
		S VIDEO	Mini DIN 4-pin	Y:1.0 V[p-p] (75 Ω) C:0.286 V[p-p] (75 Ω)	
	AV2 Input	**AUDIO L - R**	RCA PIN Type × 2	0.5 V[rms]	
		VIDEO	RCA PIN Type × 1	1.0 V[p-p] (75 Ω)	
		COMPONENT	Y PB/CB, PR/CR	1.0 V[p-p] (including synchronization) ±0.35 V[p-p]	
	AV3 Input	**AUDIO L - R**	RCA PIN Type × 2	0.5 V[rms]	
		VIDEO	RCA PIN Type × 1	1.0 V[p-p] (75 Ω)	
		COMPONENT	Y PB/CB, PR/CR	1.0 V[p-p] (including synchronization) ±0.35 V[p-p]	
	AV4 Input	**AUDIO L - R**	RCA PIN Type × 2	0.5 V[rms]	
		VIDEO	RCA PIN Type × 1	1.0 V[p-p] (75 Ω)	
		S VIDEO	Mini DIN 4-pin	Y:1.0 V[p-p] (75 Ω) C:0.286 V[p-p] (75 Ω)	
	Others	**HDMI1 / 2 Input**	TYPE A Connectors	● This TV supports "HDAVI Control 2" function.	
		PC Input	HIGH-DENSITY D-SUB 15PIN	R, G, B/0.7 V[p-p] (75 Ω) HD, VD/TTL Level 2.0 - 5.0 V[p-p] (high impedance)	
		Audio Input	RCA PIN Type × 2	0.5 V[rms]	
	Monitor Output	**AUDIO L - R**	RCA PIN Type × 2	0.5 V[rms] (high impedance)	
		VIDEO	RCA PIN Type × 1	1.0 V[p-p] (75 Ω)	
Dimensions (W × H × D)			917 mm × 690 mm × 320 mm (With Pedestal) 917 mm × 645 mm × 94 mm (TV only)	1,020 mm × 750 mm × 320 mm (With Pedestal) 1,020 mm × 705 mm × 94 mm (TV only)	1,210 mm × 864 mm × 370 mm (With Pedestal) 1,210 mm × 818 mm × 94 mm (TV only)
Mass			26.0 kg Net (With Pedestal) 24.0 kg Net (TV only)	30.0 kg Net (With Pedestal) 28.0 kg Net (TV only)	40.0 kg Net (With Pedestal) 38.0 kg Net (TV only)

Note

● Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.